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No. 2602.

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PUBLISHED WEEKLY AT 42 CANNON STREET, LONDON, E.C.4.

DECEMBER 21, 1929.

SUBSCRIPTION (WITH
DIARY) 20/- PER ANNUM
SINGLE COPIES 9d.

Vol. CXI.

MEGGESONS greet you
with all good wishes for
Christmas & the New Year

Bermondsey, S.E.16



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(Ammonium ortho-iodoxybenzoate)

FOR THE TREATMENT OF

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This product has an action resembling that of the salicylates but is more potent in its effects. It is indicated in all forms of arthritis, especially where muscle-spasm, pain, or swelling are distressing symptoms. The product may be administered either orally or by intravenous or rectal injection.

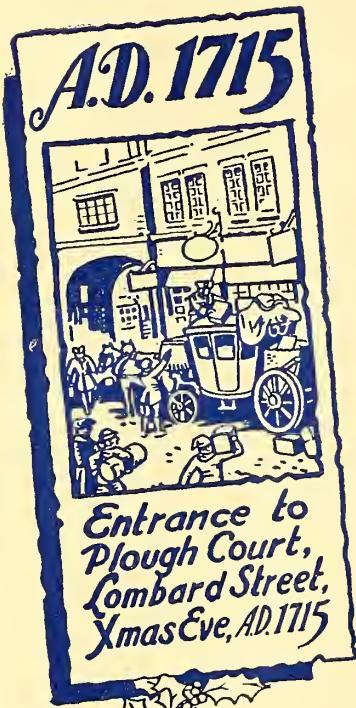
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YOUR CUSTOMERS
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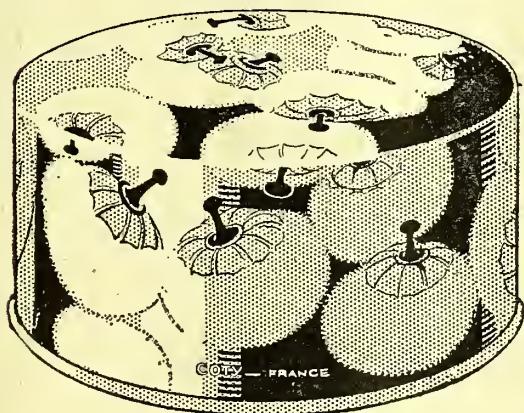
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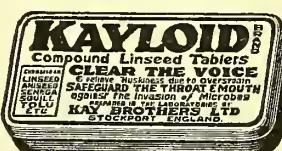
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In gross quantities

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Established 1850

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Friends for past favours, convey to
them their hearty good wishes for a*

*Happy Yuletide and a
Prosperous New Year*



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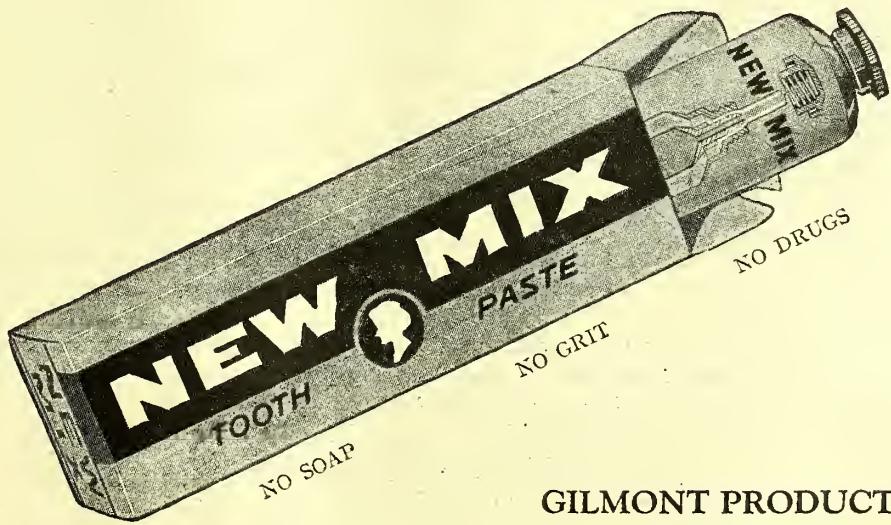
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The proprietors of NEW MIX Toothpaste offer to their many friends in the trade, a very merry and enjoyable Christmas, and a bright and prosperous New Year. Coupled with the wish that relations in the future will be as happy as those in the past.



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FOUR FAMOUS FOODS FROM THE HOUSE OF ARMOUR



Armour's EXTRACT of BEEF

This product is suitable for the kitchen and sick-room, is excellent for making Gravies, Stews, Beef Teas, and is renowned for its strengthening properties.

Packed in 1-oz., 2-oz., 4-oz., 8-oz., 16-oz.,
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Armour's FLUID BEEF

This preparation is suitable wherever skilfully seasoned Fluid Beef is required for making Bouillon, Soups, Stews, and Beef Tea.

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These have the real Beef flavour, are manufactured from genuine Beef Extract with suitable seasoning added. This is an exceptionally popular line with the Public and shows an adequate profit to the Retailer.

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Maw's Page



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Throughout the year we have business dealings with many thousands of pharmacists, not only in this country, but in all parts of the world. Always we strive to retain the personal touch in our business and to conduct our organisation as though it had a mind and a heart, as in fact it actually has.

We like to feel that our customers think of us not as a firm but as a personality and that each transaction is carried out as though it were a matter between individuals.

But business is business and in order to conserve time and energy, and to get things done, we have to adopt the usual impersonal commercial methods in our ordinary routine.

Just at Christmas time, however, we like to set business on one side and to offer to all our home and overseas customers our heartfelt Greetings, not only for Christmas but for every day and every week of the coming New Year.

Gentlemen, it has been a pleasure to serve you. We hope we have succeeded in pleasing you and that our business relations may long continue. We wish you a very happy Christmas and a busy and prosperous New Year.



S. Maw, Son & Sons, Ltd.,
Aldersgate St., London,
and Barnet.



To all our friends in the trade we tender our

HEARTIEST GREETINGS and Good Wishes for the CHRISTMAS SEASON



We hope that our extensive advertising campaigns
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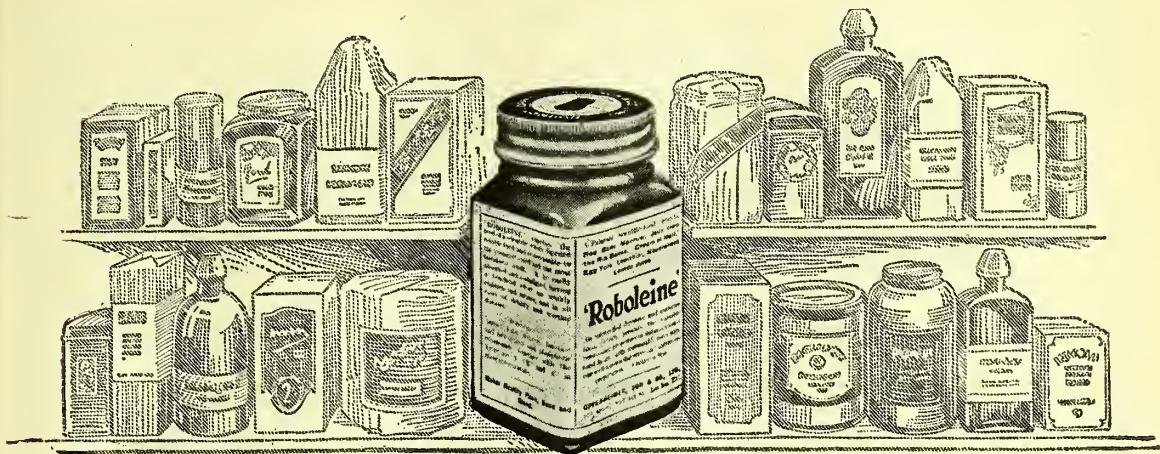
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MARSHALL'S LYSOL

will bring an increase of turnover and help to
make 1930 a prosperous year for our good
friend the chemist.



LYSOL LIMITED - LONDON, S.W.20



There are innumerable lines on your shelves—but

ROBOLEINE

is the line to which you can afford to give prominence, with every confidence. The sales, all over the country, are steadily going up and up, showing clearly that it is gaining favour with the Medical Profession and Public alike. Supported by national advertising, offered to you on the most generous terms, that guarantee you against unsold stocks, it will pay you to stock ROBOLEINE—the Public have confidence in it. Write for terms.

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“Gentlemen! Here’s a greeting to my large circle of Pharmacist friends. I’m sure the time-honoured words can’t be improved upon and so, without any frills, and in all sincerity, I wish you a real Merry Christmas and a Happy and Prosperous New Year”



My best thanks, too, for your splendid support in 1929—it’s been another “bumper” year for me

W. B. CARTWRIGHT LTD. RAWDON LEEDS

2 minutes work sells 1 cwt. COUGH CANDY week-end over the

4 $\frac{1}{2}$ per quarter lb.

Per lb. ... 11d.
28 lbs...per lb. 10d.
56 , , 9 $\frac{1}{2}$ d.
112 , , 9d.
Free Candy Bags with all supplies.

Stop your Cough before it becomes a Roar or a Growl!

AYRTON'S Herbal COUGH CANDY Will relieve the worst of Coughs

A Cough Candy which is different from any other, and which you can only buy from Your Chemist

Healing & Soothing AYRTON'S HERBAL COUGH CANDY for Chest & Lung Troubles
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Soothes the Throat
Heals the Lungs
Fine for Kiddies
Relieves that Cough

The Lion's Share of Health!

AYRTON'S Herbal COUGH CANDY is a valuable Medicinal Sweetmeat

AYRTON, SAUNDERS & CO LTD Manufacturing Chemists LIVERPOOL Eng

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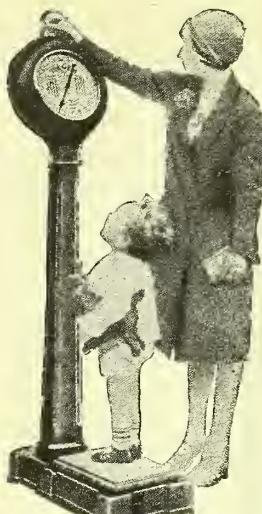
THIS NEW DISPLAY for AYRTON'S COUGH CANDY is *fiercely* attractive (as the illustration shows), yet it is delightfully easy to install.

Two minutes, and the trick is done—in any part of the window, or even in a corner. The cards, price disc and bottle are supplied free with 28 lbs.

The Candy COSTS you 9d. per lb. (in cwt. lots) and sells for 1/6 per lb. Plenty of Chemists sell upwards of 1 cwt. over a cold week-end.

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"Not two yet."

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THE Gem Machine with its beautiful lines enhances the appearance of any Chemist's or Druggist's Shop.

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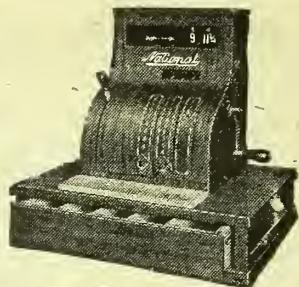
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Can you afford to be without this high class revenue-maker?—which works for you without attention.

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Safer in a



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BECAUSE

a "National" accounts for every penny that comes over your counter, prevents mistakes, leaks and loss.

It records sales from 1d. to 9s. 11½d. Indicates each amount back and front. Adds all sales into grand total. This shows exactly how much money should be in the drawer at any time. Cash drawer opens automatically. Bell rings when register is operated. Machine is quick and easy to use. Steel cabinet, best mahogany finish.

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Write for pamphlet:
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AT A
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"LIKE GREASED LIGHTNING!"

Obtainable from all Leading Wholesalers.

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*Thomas
Kerfoot & Co. Ltd.*

*offer to all their customers
and trade friends*

A GREETING FOR CHRISTMAS AND THE NEW YEAR

*and wish for them
a prosperous 1930
— especially with
"VAPEX", "KEROCAIN",
"CASTOLS", "DISTOL",
"OTTOS", "MINERAL
SPRING" HEALTH
GRANULES, EMUL-
SION PASTILLES,
and other products
of the Garden
Laboratories
at Bardsley
Vale*

THOMAS KERFOOT & CO LTD.
BARDSLEY VALE, LANCASHIRE,
& Bardsley House, London, N.1
ESTABLISHED 1797.

COPYRIGHT



GUARANTEED PURE ENGLISH PEPPERMINT OIL

Grown & Distilled from Mitcham Plants

By

**Chivers & Sons Ltd.,
Histon, Cambridge, England.**

SAMPLE AND QUOTATION ON REQUEST FROM THE SOLE SELLING AGENTS
BRUCE STARKE & CO., 16 WATER LANE, GREAT TOWER ST., LONDON, E.C.3

Established 1795.

LAUTIER FILS

Works: GRASSE (France) & BEYRUT (Syria).

Essential Oils and Synthetics.
All Raw Materials for Perfumery.

Olive, Peach Kernel, Sweet Almond Oils
Floral Waters.

Sole Agents for:—

PAOLO VIIARDI *Messina Oils:*
Lemon, Bergamote, Sweet Orange, etc.

S.A. FLORFE *Spanish Oils:*
Spike Lavender, Rosemary, Thyme,
Pennyroyal, etc.

C. MINTCHEFF & KETCHEDJIEFF
Otto of Rose. Bulgarian.

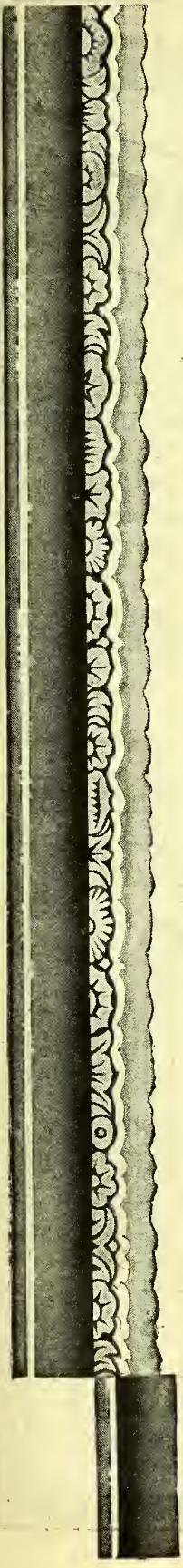
Wholesale and Export only.

LAUTIER FILS, Ltd., 107 Commercial St., London E.1.
Tel. Add.: "Lautiert, Phone, London." Phone: Bishopsgate 8271/2

**What lovely hair
Chemists' wives
have!**

No wonder !

**BŪTYWAVE
SHAMPOO.**



1930

There is no heartier greeting than the old, old phrase—“A merry Christmas and a happy and prosperous New Year.” That is just what Bourjois, Paris and London, wish for all their friends everywhere.

The feeling of confidence and friendship increases with every year that passes and the expression of good wishes has never been more cordial and sincere.

For 1930 then, “bon sante et bonne chance.”



BOURJOIS

PARIS

A. BOURJOIS et CIE., LTD., 4, Water Lane, Blackfriars, London, E.C.4

PARIS NEW YORK SYDNEY WELLINGTON

WE CREATE THE DEMAND
 YOUR SALES ARE
 QUICK AND
 PROFITABLE

HAMOES HAIR CULTURE

A sure remedy for
 GREY HAIR, BALDNESS,

SCURF, DANDRUFF,

and all other hair troubles, non-greasy.

Hamoes Hair Culture is regularly advertised in the
 National Press. It is NOT a new and untried prescription,
 but has been on the market for ten years with excellent results.

Profits exceptionally generous. Write for trade terms and full particulars.

GREENWOOD & REID

19/20 Holborn Viaduct, London, E.C.1

Phone: Central 4067

And at—57 ALBERT ROAD, LEVENS HULME, MANCHESTER

COLOGNE for the BATH & TOILET

Packed in two Styles

No. 5160

4	8	16	32	oz.
9/6	14/-	25/6	45/6	doz.



No. 5161

10	20	40	oz.
20/-	36/-	64/-	doz.



Showcards Supplied.

Manufactured by

WILLIAM TOOGOOD, LIMITED

77, SOUTHWARK STREET, LONDON, S.E.1

MERCOLIZED WAX

— : for the Complexion : —
and

STALLAX

— : a Shampoo : —

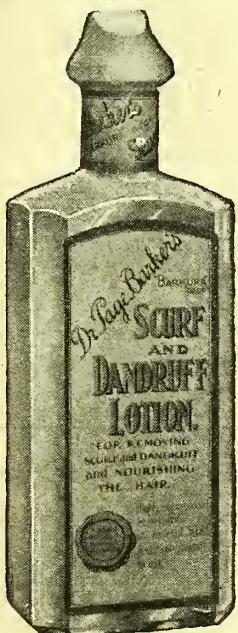
TWO substantial and well-advertised lines which show a handsome profit to the Retailer, and, moreover, may be stocked fearlessly owing to the Manufacturers' most liberal Sale or Return Guarantee.

Both are obtainable in two sizes, and their reputation and sterling value assure a steady turnover.

Order through your Wholesaler, or direct from:

DEARBORN (1923) LIMITED
37 GRAY'S INN ROAD, LONDON, W.C.1.

Telephone HOLBORN 9669



Dr. Page-Barker's Scurf & Dandruff LOTION

**The recognised
specific for scurf**

EVERY bottle of Dr. Page-Barker's Scurf Lotion bears a positive guarantee that it will eradicate scurf or the purchase price will be refunded. This makes it the easiest to sell of all hair and scalp specifics. And the profit is handsome.

2/-

P.A.T.A.

PER 18/- DOZEN

SEE OUR NEW AND ARTISTIC SHOWCARDS

WRITE FOR EXPORT TERMS

THOS. CHRISTY & CO., 4-12 OLD SWAN LANE, LONDON, E.C.4

**4d. Soap
Free**

P.A.T.A.

3d.

TUBES

containing

a
full half
ounce of

"VELDT
CREAM."

A well-kept hand is the hall mark of refinement!

**4d. Soap
Free**

"Veldt Cream"

3 doz. SHOW BOXES
carriage paid, or order 3 doz. **18/-**
from your patent house. PER GROSS

Enclosed with each tube is a coupon which when filled up the chemist is authorised to give absolutely free a full-size 4d. Tablet of "VELDT CREAM" Soap each time a 3 oz. bottle of "VELDT CREAM" is purchased. We redeem these coupons so that a chemist gets his FULL PROFIT.

Red
Rough
Chapped
Hands
made
Smooth
and
White
in a
Single
Night

Sole

Manufacturers:

The "Veldt" Laboratory.

Louth,

England

**The Public are Calling
for**

PETAL DUST

*"Wherein the subtle savour of the Flowers
sublimely dwells."*

THE GREAT FLORAL AIR PURIFIER

A Trial will convince you that—

PETAL DUST, when once shown, creates its own demand, and is therefore a valuable adjunct to every "go-ahead" store.

PETAL DUST, when displayed prominently upon your counter, will attract prudent customers by the fragrance of its unique odour, which to-day is of such universal admiration.

Retails in packets at 4d. and 8d. each.

Attractive Advertising matter free on request.

Obtainable through all the usual Wholesale Houses or from Sole Producers:—

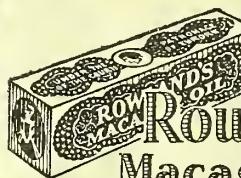
The Rosmarine Manufacturing Co.
LONDON, S.E.1.

For 136 years

Rowland's Macassar Oil has been a favourite dressing for the hair. It keeps the hair healthy, and prevents the encroachment of greyness and baldness.

Of all Wholesalers.

RETAIL
3/6, 7/- & 10/6
P.A.T.A.



Rowland's Macassar Oil
Red for dark hair
Golden for fair or grey hair
A. ROWLAND & SONS, Ltd., 112 Guilford St., London, W.C.1

MORGAN'S POMADE

A genuine preparation which performs all that it claims—namely, to restore grey and faded hair to its original colour, to strengthen the hair against further danger of becoming dry and thin, to remove and prevent the recurrence of scurf and all unhealthy conditions of the scalp.

Thirty-five years' solid reputation. On the list of the P.A.T.A.

Retail 1/9 per pot; 3/3 per pot.
Wholesale 14/- per doz.; 26/- per doz.
1-lb. jars for Saloon use at 6/3 per jar.

Obtainable from all the leading Wholesale Houses, or direct—
THE MARIE ANTOINETTE CO. 149 JUNCTION ROAD
LONDON, N.19

(2)

AN APOLOGY

Lavender House,
London, E.8.

We would like all those of our friends in the trade who have recently suffered at our hands from late delivery to accept our sincerest apologies.

Delays, where they have occurred, have resulted from temporary hold-ups in certain of our sources of supply upon which the greatest strain has been placed owing to the unprecedented volume of business we have had to handle.

We are offering this explanation, which we appreciate can in no way excuse us, because we feel keenly that the great inconvenience and annoyance, which we realise must have been caused, is a very ungracious return for the goodwill shown to us which has manifested itself in the shape of overwhelmingly record business.

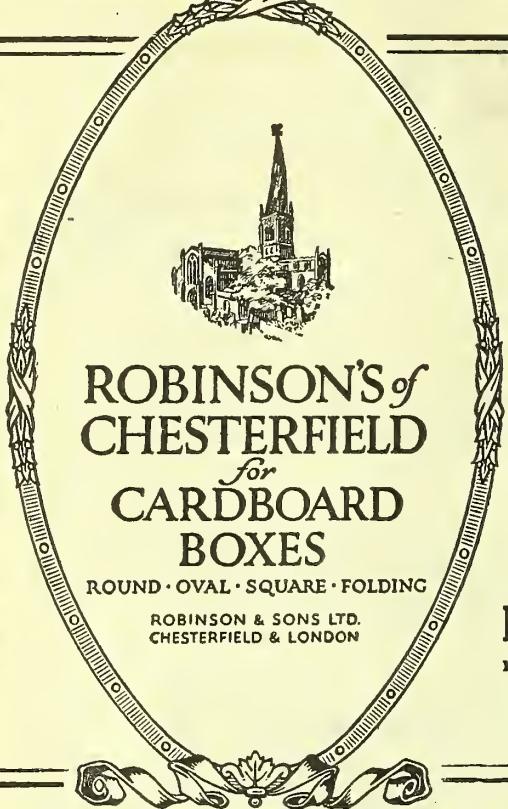
We are at the same time most anxious to retain the confidence of the trade and would like to take this opportunity of giving our assurance that all necessary steps are being taken to ensure against our again being found wanting.

With the compliments of the season, and all good wishes for a very prosperous New Year,

We remain,

Yours faithfully,

Potter & Moore Ltd.



**ROBINSON'S of
CHESTERFIELD
for
CARDBOARD
BOXES**
ROUND · OVAL · SQUARE · FOLDING
ROBINSON & SONS LTD.
CHESTERFIELD & LONDON



**REFINED
BI-CARBONATE
of
SODA
B.P. QUALITY.
WILLIAM B. HARRIS
NORTHAMPTON
& COVENTRY**

**PURIFIED
EPSOM
SALT
B.P.**

BEADED BOXES

The boxes illustrated above are finding increasing favour amongst chemists. They are dust-proof and air-tight and of a very attractive appearance. Fitted with a flanged metal lid which is easily lifted out they form a very useful container. Blank panel on reverse side for printing in Customer's name and address.

ROBINSON & SONS, Ltd.
Manufacturers of ROUND, OVAL, SQUARE AND FOLDING
CARDBOARD BOXES.

CHESTERFIELD

G. B. KENT & SONS, LTD.

Are known the World over as
the Largest Manufacturers of

BEST BRITISH BRUSHES

Please write for full Particulars to—

75 FARRINGDON ROAD, E.C.1.



From all
Wholesalers.
Packed in $\frac{1}{2}$ -dozen Display Boxes.

Manufacturers:

W. R. Speer & Son (EST.
100 YEARS)
215 DALSTON LANE - - LONDON, E.8
Agent for S. Africa—C. GORDON DAVIES & CO.,
National Bank Buildings, Pritchard Street, Johannesburg.

Telephone: Axminster 5.

ESTAB. 1847.

Telegrams: “Coate, Axminster.”

COATE & CO. (Axminster) Ltd.

The London Brush Works, Axminster, Devon

Manufacturers of Super British Brushes

Our Special “PROPHYLACTIC” Tooth Brushes—

3 row Hard, Medium, Soft, Yellow Hair at	16/- per dozen
4 "	18/- "

Orders for one gross supplied in Cartons with customer's name and address free.

Every Brush Guaranteed.

British made by British Labour.

Send for our present list of prices.

Full range of samples can be seen at ROBERT W. PHILLIPS, Craven House, Kingsway, London, W.C.2

'MOTHAKS'

(MOTH KILLERS)

FOR EXPORT

We are getting enquiries from all over the World for "Mothaks" and we shall be glad to consider agencies in any part of the British Empire and other countries.

THOMPSON & CAPPER WHOLESALE LIMITED
MANESTY BUILDINGS, COLLEGE LANE
LIVERPOOL, England.

EASILY ONE OF THE BEST SELLERS. A VERY FASCINATING DEVICE FOR PREVENTING THE RAVAGES OF MOTHS.
"MOTHAKS" SELL AT SIGHT.

Packed in bags of 8.
Price 48/- per gross bags.



**Every dog-owner
will wish
to read
this
leaflet**

DOG owners who read these leaflets become regular and intelligent users of dog medicines. Mr. G. Booker, M.P.S., of Doncaster, wrote:

"We are pleased to say that the counter slips are responsible for a LARGE INCREASE in our Bob Martin SALES."



ON receipt of a postcard we will be pleased to send you a Display Container holding 150 leaflets, together with a small window bill or any other display material (showcards or display screens) which you would like to have.

BOB MARTIN, LTD.,
Dog Medicine Manufacturers since 1892,
Southport, Lancs.

The sales of Bob Martin's Tasteless Condition Powders are twice as great as the sales of any other dog medicine.



Make displays and attract custom. Order your stock to-day and apply for free advertising matter.

**DRUMMER
DYES**

EDGES

BOLTON

London Office:
EWING HOUSE, 73/4, CHISWELL STREET, LONDON, E.C.1

**BATTLE'S
PROFITABLE LINES**

specially packed for the Trade

STOKALIN

A SURE REMEDY

for all kinds of

FEVER and INFLAMMATION in COWS
and CALVES, SHEEP, PIGS, HORSES

**COW or UDDER SALVE
LAMBING OILS**

CARBOLISED OILS

EMBROCATION (Household,
Footballers', Vety.)

LYSOL DISINFECTANTS

Large Profits. Special own name packing.

Write to:—

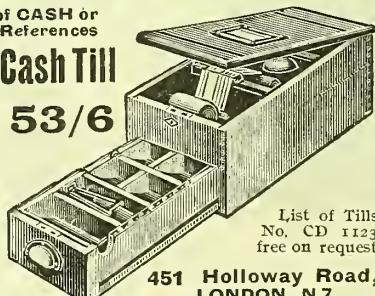
**BATTLE, HAYWARD & BOWER
LINCOLN**

SENT ON 14 DAYS APPROVAL

Upon RECEIPT of CASH or
Two Wholesale References

'The Argyle' Cash Till

Size $17\frac{1}{2} \times 9\frac{1}{2} \times 7$, as
illustrated. Solid
mahogany, highly
polished. Lock
to lid and drawer.
Check action, war-
ning bell and secret
catch. Coils $3\frac{1}{2}$ ins.
wide, 4/- doz.
Buy direct from the
manufacturers.
Guaranteed for
5 years.



53/6

List of Tills
No. CD 1123
free on request

451 Holloway Road,
LONDON, N.7

City Showrooms:
65/66 Fore St., E.C.2

DUDLEY & CO. Ltd.

NURSE HARVEY'S MIXTURE

A safe, simple and reliable remedy for Children's
Ailments is advertised so extensively in the daily
and weekly Press as to bring mothers to the
retailer without effort on his part.

The selling has been done before the mother
reaches the chemist, and, having supplied her, it
is only common sense to claim she will buy other
family necessaries from him. Moreover, the con-
tinuous demand for it produces a quick turnover.

For Direct Terms apply to—

OSCAR SCRUTON & CO., YORK



Why KORK-N-SEAL is the ideal cap for your product.

1. It is removed by hand. No Corkscrew, opener or tools of any kind necessary.
2. It re-seals perfectly—as often as desired.
3. It keeps your product fresh and pure to the last drop.
4. It is sanitary—protects the pouring edge of the bottle.
5. It prevents leaking under any condition.
6. It makes a neater and more distinctive package.
7. It cuts capping costs and makes for factory saving.
8. It does away with corking—wiring—waxing and other combinations.
9. It provides an unusually attractive advertising opportunity. Your name or trade mark may be lithographed in colours on Kork-N-Seal. This gives you an advertisement that will last long after the contents of the bottle are used.
10. The position of the little lever is a "danger signal" that indicates at a glance whether the bottle is sealed or not. No other bottle closure has this feature.

*British made throughout at our own Works,
Charlton, S.E.7.*

WHEN the all-important question of closures arises, study Kork-N-Seal. It's use means simple opening and perfect re-sealing, lasting advertisement, better finish and a splendid selling point. Thousands of modern manufacturers now use Kork-N-Seal exclusively. May we discuss its application to your product?

KORK-N-SEAL LTD.

Manufacturers of Aluminium, and decorated Tin closures of every description.

40-43, NORFOLK ST., STRAND, LONDON, W.C.2.

Telephone: Temple Bar 6680. Telegrams: Korkseal, Estrand, London.



The Logical closure for

Catsup	Flavourings	Proprietary Medicines
Salad Dressing	Malts	Medicinal Wines
Vinegar	Oil Articles	Furniture Polish
Olive Oil	Antiseptics	Shoe Polish
Mustard	Serums	Stains
Salad Oil	Disinfectants	Oils
Olives	Citrate of	Shellac
Horseradish	Magnesia	Varnish
Fruit Juices	Effervescent	Dyes
Syrups	Salts	Cleaning Fluids
Extracts	Pharmaceutical	Ammonia
	preparations	Peroxide
And all products used gradually.		

Patents
1920
1921
1923

FRED K. FINK & CO.

10 & 11 MINCING LANE, LONDON, E.C.3.

TEL. : ROYAL 6094.

GUMS, ARABIC and TRAGACANTH as Imported or Finely Powdered. :: SHELLAC ALL GRADES.

"BIS-U-MINT"

Reg. Trade Mark. Powder, 4½d. and 7½d.; Ovals, 7½d. THE PROFITABLE ADVERTISED LINE WHICH BRINGS REPEAT BUSINESS.

From your Wholesaler or direct.

GOLD SEAL PROPRIETARIES LTD., CROYDON

OLIVE OILProducers—CHAFFARD & COUDERC,
MARSEILLES (France).

Sole distributors for Australia :

WILLMOTT, PRISK & CO., LTD.

ADELAIDE : 134 Grenfell Street; SYDNEY : 379 Kent Street;
MELBOURNE : 37 Swanton Street.**TATCHO** Sample Size 6d.
THE HAIR RESTORERPROMOTES, PRODUCES, 1/3 size ... 12/6 per doz.
BEAUTIFIES THE HAIR, 2/9 size ... 26/- per doz.

TATCHO Laboratories, 5 Great Queen Street, London, W.C.2

6 Bottles in Case for Counter Display,
4/- PER DOZ.**SHADEINE**

FOR TINTING GREY HAIR

This popular article is largely advertised and stocked by all Wholesale Houses.
Trial size 8d. per doz. 6/-
1/4 size, per doz. 12/-
2/6 size, per doz. 24/-
3/9 size, per doz. 36/-

The SHADEINE CO., 58 Westbourne Grove, London, W.2

**A HALEX SEEN
IS A HALEX SOLD**

Ladies and Gentlemen!

May we wish you a

VERY MERRY CHRISTMAS!The Swiftsure Photographic Works
SUTTON COLDFIELD Central for everywhere.**Advertising and the Shopkeeper**

By HAROLD W. ELEY.

A clear guide to advertising methods specially designed to aid the ordinary retailer who does his own advertising. 3s 6d net, of a bookseller, or

PITMAN'S, Parker Street, Kingsway, W.C.2
(WRITE FOR BUSINESS LIST)**"YEAST FOR VITAMIN B."**

Yeast specially prepared for medicinal purposes.

GUARANTEED ABSOLUTELY PURE.

MIDGLEY & PARKINSON, LTD.,
WARREN WORKS, PUDSEY, LEEDS.**SULPHUR CANDLES**

— IN ALL SIZES —

R. DARTON GIBBS & CO. LTD.

OLDBURY, Nr. BIRMINGHAM.

DUTCH DROPS

The Original HAARLEM OIL

Glasfille

Also in Capsule Form.

We are Sole Distributing Agents for the British Isles, British Colonies, Scandinavian Countries, Spain, and South America.

BROOK, PARKER & CO., LTD., BRADFORD.

Mermaid

BUY AND SELL O

FACE CLOTHS

REGD.

London,
E.C.4**THE HOUSE FOR QUALITY IN PUFFS**NOVELTIES ALWAYS AVAILABLE
COMPACT POWDERS

Specially Prepared.

Any Tint. Any Perfume.

F. SCHUTZE & Co., Ltd.
BLACK BULL WORKS, CALEDONIAN ROAD, LONDON, N.7**MASQUE ROUGE**
THE POPULAR AND PROFITABLE PERFUMEPARFUMS MARCEL GUERLAIN LTD.
Regent Arcade House, 252-260 Regent St., LONDON, W.1**MANCHESTER TUTORIAL COLLEGE**

327 OXFORD ROAD, MANCHESTER.

J. E. GRIME, B.A., B.D.; Director of Studies.

REVISION COURSES, for PRELIMINARY SCIENTIFIC

EXAM., start JANUARY, APRIL, JULY and OCTOBER.

FULL COURSES for PHARMACEUTICAL PRELIM.

Advertising and the Shopkeeper

By HAROLD W. ELEY.

A clear guide to advertising methods specially designed to aid the ordinary retailer who does his own advertising. 3s 6d net,

of a bookseller, or

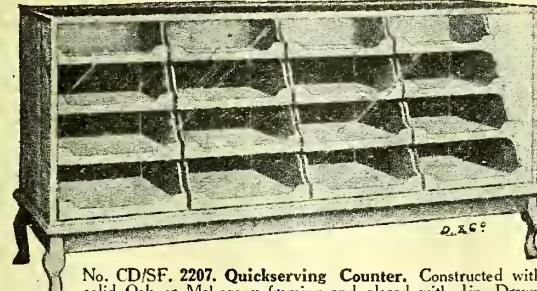
PITMAN'S, Parker Street, Kingsway, W.C.2

(WRITE FOR BUSINESS LIST)

YOUR
Customers
with
Artificial
Dentures
Will Readily
BUY IT.

THOS. CHRISTY & CO., 4/12 Old Swan Lane, London, E.C.4

Don't Walk round your Counter to serve



No. CD/SF. 2207. Quickserving Counter. Constructed with solid Oak or Mahogany framing and glazed with 1 in. Drawn Glass top, front and two ends. Overall dimensions 6ft. long \times 3ft. high \times 2ft. wide. Interior fitted 16 solid Oak trays. All trays are 15 $\frac{1}{2}$ ins. wide. Top row is 12 $\frac{1}{2}$ ins. back to front, second row is 15 $\frac{1}{2}$ ins. back to front, third row is 18 $\frac{1}{2}$ ins. back to front, and bottom row is 21 $\frac{1}{2}$ ins. back to front. Mounted on fluted and tapered legs fitted with ingeniously designed metal adjusting feet. £22 : 0 : 0 each

With the aid of these Quickserving Counters in your shop you definitely obviate waiting customers. Any item can be seen and served in a minimum of time thereby ensuring good service to your customers.

This Counter can be supplied on an initial payment of 41 2 A further 11 equal monthly payments makes it your own complete property.

Send for our fully illustrated list of Cases, No. C.D.1078.

DUDLEY & Company, Limited
451 Holloway Road, London, N.7.

City Showrooms : 65/66 FORE STREET, E.C.

Losses

McCaskey saves profits

Faulty book-keeping increases your losses. The McCaskey 'one writing' system does away with book-keeping drudgery and eliminates error. There is only one entry with the McCaskey system and your book-keeping is done

MCCASKEY
CREDIT SYSTEMS

ONE WRITING

With the 'Surety' Carbon-Coated Pads

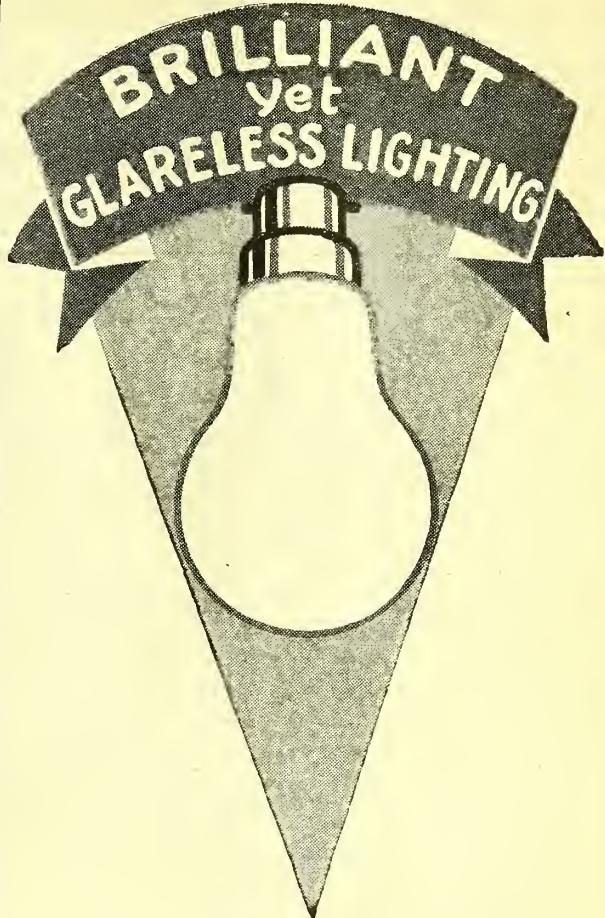
To The McCaskey Register Co.,
Watford, Herts.

Please send particulars of the
McCASKEY SYSTEM.

Name.....

Address

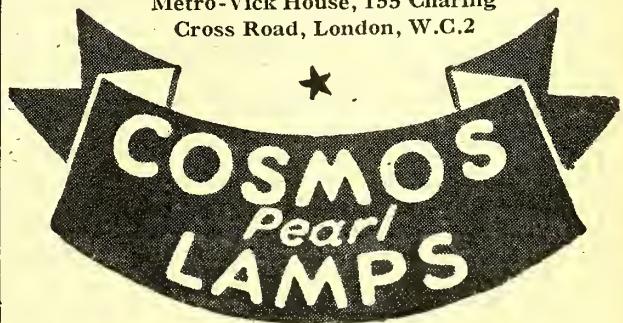
O. & D. 21-12-20



A brilliant searching radiance with entire absence of distracting and harmful glare—that is a reason for installing
COSMOS Pearl LAMPS

METRO-VICK SUPPLIES
(Prop. Associated Elect. Industries, Ltd.)

Metro-Vick House, 155 Charing Cross Road, London, W.C.2



THE USE OF

COLOUR

in advertising is known to enhance the appeal of an announcement.

An opportunity for printing your advertisement in two colours will occur in each of the following issues of *The Chemist & Druggist*

FEB. 1, 1930 - GREEN & BLACK

MAR. 29, 1930 - RED & BLACK

MAY 31, 1930 - RED & BLACK

JUNE 28, 1930 Annual Special Issue

AUG. 30, 1930 - RED & BLACK

OCT. 4, 1930 - GREEN & BLACK

NOV. 29, 1930 - RED & BLACK

DIARY 1931

Ask for details from the Publisher

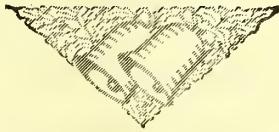
**THE CHEMIST AND DRUGGIST, 42 Cannon Street
London, E.C.4.**

Potter & Clarke^{Ltd}

proprietors of

POTTER'S
ASTHMA CURE
POTTER'S
CATARRH PASTILLES
Manufacturers of
EXTRACTS, TINCTURES,
PILLS & TABLETS, Etc.
Distillers of
ESSENTIAL OILS

Wish their many friends a
merry Christmas, and a
most prosperous New Year



POTTER AND CLARKE LTD.

Phone
Bishopsgate 1011 lines
Trans
"Horehound" Phone and at 24, LUNA ST, STANCOATS, MANCHESTER. Manufacturing Chemists, 60, 61, 64, ARTILLERY LANE, LONDON, E.1. Phone
City 6648
Trans
"Horehound" (Horehound) Chester

We have minimised production costs by equipping our Works with the most up-to-date machinery.

These Tubes are of the highest quality and finish combined with as low prices as any house in the Trade.

BETTS COLLAPSIBLE TUBES

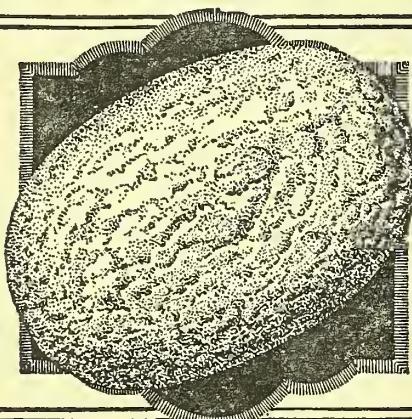


Samples and Quotations on request.

Best Service and Delivery.

ESTABLISHED 1857.

BETTS & CO. LTD. 1 WHARF ROAD, CITY ROAD, LONDON, N.1.



Bath Rusks

Unsolicited testimonials daily for Carr's famous Bath Rusks which are ideal for babies and young children. Scores of letters from grateful mothers. Recommended everywhere.

Made only by
CARR'S of Carlisle
The Oldest House in the Trade

POWDER BELLows



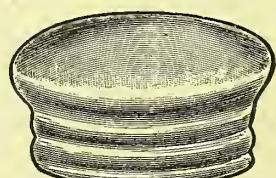
Baker Metal Stopper Co. Ltd.

RELIANCE STOPPER WORKS

261 Icknield St., BIRMINGHAM.

Telegrams: "Screwcap, Birmingham."
Telephone: Northern 1562.

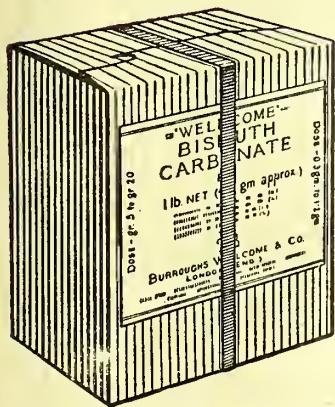
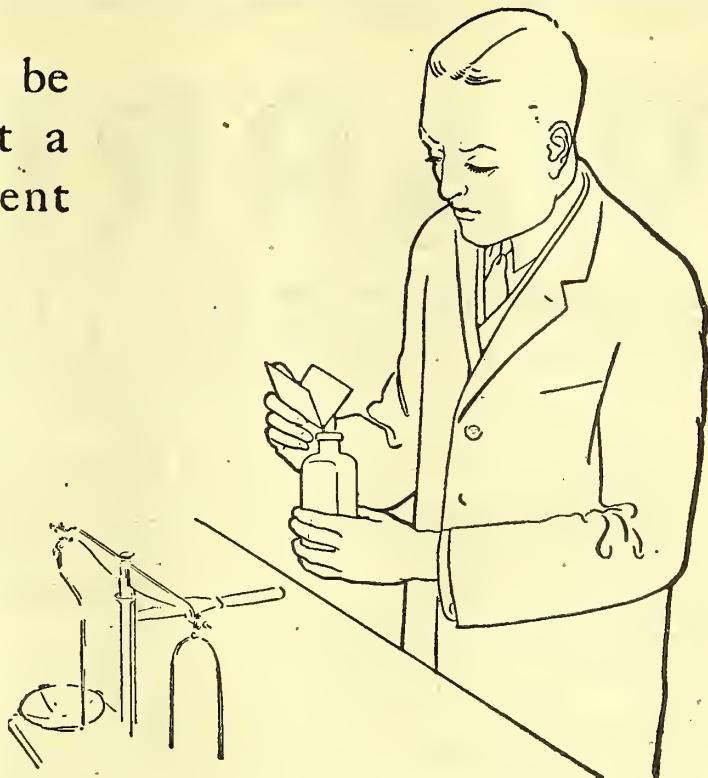
ALUMINIUM BOXES



SCREW CAPS in ALL Metals

Including Nickel Silver and Gilt for Face Cream Pots, and for frozen Cologne containers.

Light enough to be dispensed without a suspending agent



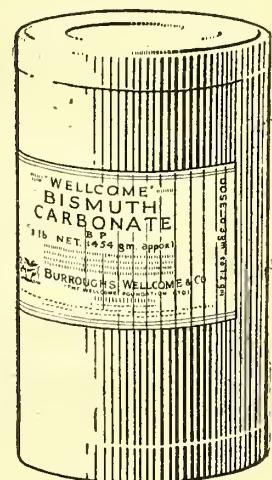
Packing for Overseas

Use it for all dispensing purposes.

‘Wellcome’ Brand Bismuth Carbonate is light enough for mixtures, heavy enough for powders and cachets. It is of supreme purity, being “Better than B.P.” It contains less nitrate and less alkali carbonate.

‘WELLCOME’^{BRAND} Bismuth Carbonate

In 4 oz., 8 oz., 1 lb., 4 lb. and 7 lb. cartons. For prices, see price list of ‘Wellcome’ Brand Chemicals and Galenicals



Packing for British Isles



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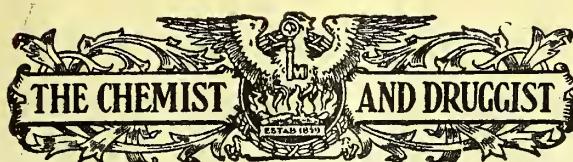
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Recent Patents

Abstracts of specifications of recently-granted patents for inventions. The complete specification (1s. each including postage) of any British patent can be obtained from the Patent Office, 25 Southampton Buildings, London, W.C.2, on quoting the name of the patentee and the number of the patent.

Antirachitic Substances.—Process of treating materials for nutritive and (or) medicinal use to form therein a substantial amount of antirachitic substance, which consists in subjecting the materials to an exposure of rays of a given length. (C. M. Richter, Chicago. 296,053.)

Guard for Safety Razor Blades.—A toothed or comb-like guard for flexible safety razor blades with needle-like bearing points placed in such a position on the teeth that they support the blade at the extreme edges and divide the edges into small sections. (Paul Müller, Solingen. 321,630.)

English and Welsh News

The Editor will be obliged if subscribers will send him marked copies of newspapers containing items of interest for insertion in this or other news sections.

London Chamber of Commerce

A special meeting of the Chemical Trade Section of the London Chamber of Commerce was held on December 17, Mr. D. Lloyd Howard presiding. The chairman stated that since its publication in 1926 the translation of the British Pharmacopœia into Chinese had met a real need, and had proved of great advantage to British chemists in competition with American producers of pharmaceuticals. Our trade with China had increased appreciably as a result. Mr. E. J. Millard pointed out that another issue of the British Pharmacopœia would be published in 1931, and expressed the opinion that the Section might be requested to take steps to have this translated into Chinese also. A member reported that heavy breakages of scientific glassware occurred after examination by the Customs authorities. The fault apparently lies in the repacking by Customs officers, who, in the main, are inexperienced in packing of this particular nature, which requires skill and extreme care. The meeting decided to form a deputation of scientific glassware traders to approach the Customs authorities with a view to preventing future heavy breakages. Mr. D. Lloyd Howard was re-elected chairman of the Section for the ensuing year, and Mr. E. J. Millard was elected deputy chairman.

Inquests

At an inquest held in East London on December 13, the coroner commented on a suicide by means of spirit of salt, which he said was, unfortunately, too easily obtainable.

At an inquest held in Birmingham, on December 13, on the body of a baby who died in hospital from toxæmia following scalds, the coroner said he would like to draw public attention to the fact that a mixture of oil and lime water, generally known as caron oil, was in the light of latest medical knowledge not good for scalds in their early treatment. It increased the risks in regard to toxæmia. Dr. Freshman, of the Queen's Hospital, expressed the view that there was danger in using oil for scalds. A clean linen sheet or sodium bicarbonate solution was better than oil.

A verdict of "Suicide" was returned at Rawtenstall, on December 16, at an inquest on the body of Edward Beasley, Bacup, who poisoned himself with arsenic. The foreman colourist at a local printing works said the arsenic was kept in a keg in the drug room. Employees could help themselves if they knew what they were after, but no one was supposed to know what was in the room except those who used the materials. Asked if it would not be better if the room was kept locked, witness said it probably would, but they did not look on the materials as poison when they used them every day in their employment. The coroner said one would have thought these drugs would have been kept under supervision and not so easily accessible. There might be some explanation as to why it was impossible to keep the room locked, and he would communicate with the firm. He hoped the explanation was satisfactory, for if there was a repetition of these deaths there would certainly have to be more extensive inquiries to see who was responsible for this state of affairs.

Birmingham

"Shop Early" and "Shop in the Morning" are two slogans prominently displayed locally.

Mr. Ernest John Mann, son of Mr. E. W. Mann, Ph.C., has passed his final examination for the degree of M.B., Ch.B. of the University of Birmingham.

An engagement is announced between Mr. Innes Barclay, son of Mr. and Mrs. Thomas Barclay, of Metchley Grange, Harborne, and Christine, younger daughter of Mr. and Mrs. Ernest Fresson, of Grove End, Northwood.

An interview with Mr. Alfred Southall, Ph.C., appeared in a recent issue of the "Birmingham Mail." Mr. Southall imparted some interesting reminiscences of Newman, John Bright, Joseph Chamberlain and other eminent men connected with the city.

Liverpool

Mr. W. H. Saunders, F.C.S., chairman of Ayrton, Saunders & Co., Ltd., has sailed for the West Indies.

Mr. J. G. Wallbridge, the retiring president of the Liverpool Chemists' Association, has just celebrated his jubilee.

With the object of forming an association there will be a meeting of old students of the Liverpool School of Pharmacy in the lecture-theatre at Blackburne Place on January 8, at 8.30 p.m.

The business of Ernest Taylor, Ltd., manufacturers of tin boxes, aluminium boxes and tablets, has been formed into a new company to be known as the British Can Co., Ltd. Agreements have been entered into with the American Can Company and the Thermokept Corporation, securing to the British company the sole rights for Great Britain and Ireland of their machinery, production methods and laboratory resources. Extensions have already been made to the factory at Breeze Lane, Walton, Liverpool, and the new company are about to secure another factory in London. Mr. Ernest Taylor, Mr. J. H. Jackson and Mr. F. W. Rankin (all directors of Ernest Taylor, Ltd.) have joined the board of the new company, Mr. Ernest Taylor being managing director.

Nottingham

"The Nottingham Guardian" of December 16 published a half-column article by Dr. J. C. Ashton arguing that pharmacists, in suggesting increased safeguards for dispensing, are prompted by the desire of obtaining a monopoly.

At Nottingham Police Court, on December 10, Abraham Cohen (31), 91 Castle Boulevard, and Ramos Luro (26), of the same address, both described as masseurs, were committed for trial on charges of obtaining money by false pretences. The defendants are alleged to have extracted money from people on the promise that they could cure all kinds of ailments with "Eastern Oil," and they gained the name of "miracle men." Mr. S. R. Trotman, F.I.C., said that he received certain samples of medicine. One sample of "Eastern Oil" he examined contained 0.11 per cent. of ammonia, 3.81 of camphor, 2.10 of unsaponifiable oil, and 90.70 of saponifiable oil. Another bottle of mixture contained 99.29 per cent. of water, 0.11 of quinine, and 0.25 of mineral matter. He examined a powder which proved to be a mixture of borax and salt.

Sheffield

Mr. C. W. Hobson recently lectured before the pharmaceutical students at the Central Commercial College on "Emulsions."

Mr. W. R. Fairest has taken over the management of the drug department of the Brightside & Carbrook Co-operative Society, Ltd., in place of the late Mr. C. Dann, Ph.C., and Mr. H. Sagar has given up his business in Longsett Road to become manager of the drug department at the Society's new stores.

Miscellaneous

POISON-LICENCE APPLICATION.—Garden Service, Watford, has applied to the local authority for a licence to sell agricultural and horticultural poisons.

WINDOWS DEFACED.—Included in a number of plate-glass windows which were maliciously damaged by slashing at Swindon during the night of December 3 were those at the premises of Mr. H. L. Howell, chemist and druggist, Regent Street.

IN THE COURTS.—In Cardiff County Court, recently, the Pharmaceutical Society of Great Britain obtained judgment in the sum of £3 3s. against Mr. Philip J. Phillips, chemist and druggist, in respect of arrears of subscriptions, and an order for the return of his membership certificate.—At Matlock Police Court, recently, J. Price, Darley Dale, and J. Hills, Two Dales, were each ordered to pay 10s. costs on summonses for having sold Jeyes' Fluid No. 2 not duly labelled.—At North London Police Court, on December 18, Charles N. Martin (36), waiter, of no fixed abode, was sentenced to three months' hard labour for stealing goods value 7s. 6d. from the shop of Mr. F. E. Pullen, chemist and druggist, Crouch Hill, N.4.

Scottish News

Brevities

Mr. Fred W. Stiven is representing Regent Chemicals, Ltd., Craigleath Chemical Works, Edinburgh.

"I note with surprise," writes a correspondent, "that in some circles in Scotland heroin is still a Part II poison."

An appeal was made for the improved equipment of the chemical department of Glasgow University at the annual Ramsay Chemical dinner which was held in Glasgow on December 10. Principal Rait declared that the buildings, which were of a temporary nature, had grown unsuitable in the period of their existence.

The Aberdeen School of Pharmacy's Social Circle have held the following meetings this season:—On October 30, Dr. E. G. Bryant gave a very interesting and instructive address on "Recent Changes in Pharmacy," comparing the present-day education of the young pharmacist with the old system of training. On December 4, Mr. Craven, B.Sc., A.R.C.S., A.I.C., gave a brief account of chemical knowledge from ancient times. The lecture was well illustrated with lantern slides lent by the Chemical Society.

Irish News

Brevities

Mr. B. G. Fagan, B.Sc., Dublin, has been appointed county analyst for Westmeath.

Opposition to the proposal to extend medical benefit to Northern Ireland is becoming more outspoken in rural areas. Armagh Board of Guardians recently passed a resolution on the subject, and at a meeting on December 10 a long letter was read from the Ministry of Labour with reference to the scheme. Mr. T. H. Hardy, J.P., remarked that he had heard all this before, and they were not inclined to swallow it. Mr. Corkey: We are doing more good for them free under the dispensary system than they would get under the panel system.

Belfast

Mr. Robert Andrew, Ph.C., F.C.S., Crumlin Road, Belfast, presided at the recent annual dinner of the Belfast Benevolent Society of St. Andrew.

Sir William Whitla, M.D., L.P.S.I., has been re-elected a Pro-Chancellor of the Queen's University of Belfast, and has been elected president of the Belfast Young Men's Christian Association.

At Thomas McMullan & Co.'s staff dance, held on December 13, a gold wristlet watch was presented to Mr. W. Saunderson, an apprentice in the firm, in recognition of his bravery in rescuing a man from drowning in the Lagan recently.

At the monthly meeting of the Belfast Corporation the medical superintendent officer of health reported that he had communicated with the Ministry of Home Affairs on the question of obtaining the Ministry's approval to expenditure on vaccines, antitoxin, serums, etc., and had received a reply to the effect that the Ministry was not aware of any statutory enactment enabling the Corporation to manufacture and distribute these substances generally, either free of charge, or for payment; but that as the education authority the Corporation would be entitled to supply vaccines for the treatment of children of school age.

At Belfast Assizes, on November 26, James Murray, lamplighter. James Thomas Murray, his son, and Mary C. Murray, his wife, were charged with stealing and receiving twenty-three hair brushes belonging to William Burrows, carrier, Coalisland. Charles Waddell, manager for Mr. George E. Waddell, hair brush manufacturer, Donegall Street, said that the brushes were ordered by Mr. R. E. Marshall, Ph.C., Dungannon. By the direction of the judge Mary C. Murray was discharged on the ground that she was jointly charged with her husband. The accused were found "Not guilty" of larceny, but James T. Murray was convicted of receiving, and was sentenced to six months' imprisonment.

Retail Pharmacists' Union

A Controversy Ended

WE have received the following official statement from Mr. G. A. Mallinson, secretary of the Retail Pharmacists' Union:—

The following is an announcement which has been agreed between the Retail Pharmacists' Union and Messrs. Gollin & Co. Pty., Ltd.:—

"We have pleasure in announcing that the differences between Messrs. Gollin & Co. Pty., Ltd., the proprietors of Aspro, and the R.P.U., have now been settled on the following basis:—

"(a) Messrs. Gollin & Co. Pty., Ltd., will not do anything to divert the chemists' business in Aspro into other channels of trade.

"(b) Messrs. Gollin & Co. Pty., Ltd., will not in public advertising depart from the present statement that Aspro is obtainable at all chemists and stores.

"(c) The R.P.U. undertake on their part to circularise every member of the Union stating that there has been a resumption of amicable relations and that the veto on Aspro is withdrawn absolutely.

"The above settlement represents views expressed by Messrs. Gollin & Co. Pty., Ltd., i.e., that it is not their policy to divert business from one trade to another, and that they wish to see pharmacy strengthened—not weakened."

You will note that the R.P.U. veto on Aspro is therefore withdrawn, and that normal business relations may now be resumed.

Festivities

East Metropolitan Social

THE second annual social and dance of the East Metropolitan Branch of the Pharmaceutical Society (Junior Section) was held at Forest Gate on December 12. Mr. Beardsley (member of the Council), kindly acting as M.C., congratulated both Mr. Everitt (chairman) and Mr. Wheatley (secretary) on their hard work, which made possible such an enjoyable evening. Prizes for spot dances were presented to Miss R. Morrison, Mr. Haylock, Miss Pears, Mr. Leggeborne, and Miss Webb by Mrs. Beardsley.

London College of Pharmacy

THE annual reunion dinner and dance on November 27 was attended by a record gathering of old and present students, the principal, Mr. Irvine G. Rankin, B.Sc., Ph.C., in the chair. The menu, printed in the college, was in the form of a prescription with appropriate directions. Mr. S. R. Atzema, of the Social Committee, made an excellent toastmaster. After the toast of "The King" had been honoured, Mr. C. E. Bligh proposed the toast of the "London College," and on behalf of the present students regretted the absence of Mr. Gulliver, but said they had found a very able successor in Mr. Rankin who, by his conscientiousness, his sense of humour, his willingness to help one and all, and his natural happy disposition, had made him highly respected by all the students. The toast was seconded by C. S. Loughnane on behalf of the old students, and supported by Miss K. Lincoln for the lady students. The principal, in his response, thanked them for their appreciative remarks, and paid a tribute to the loyalty, efficiency and whole-heartedness of the staff. He was pleased to see such a record number of old students, but was disappointed with the rarity of their visits to their old college. He therefore thought his best course was to outline the progress in equipment that had taken place during the last few years, culminating this year in the new histological laboratory. He gave two reasons for his review: first, to put on record the fact that the progress just described was due to Mr. C. W. Gosling; second, to remind old students that these improvements actually took place. He hoped that old students would periodically revisit the college. The Old Students' Association was then inaugurated, and Mr. I. G. Rankin,

chairman, gave an account of the questionnaire sent to old students and read a letter from Mr. H. Wootton, B.Sc., the founder of the college, who wished the Association success, but regretted his inability to accept any duties connected with it. It was unanimously decided to call the Association "The Old Cyanides," with Mr. C. W. Gosling, Ph.C., as its first president. Mr. Gosling addressed the students. The three main divisions of collegiate life—academic, social and sporting—were catered for, and it was to improve the social life of the college that the Old Cyanides Association was formed, and an invitation to all old students to join up was extended. Dancing followed until 1.30 a.m.

Associations' Winter Session

Birmingham.—A meeting of the Birmingham Pharmaceutical Association and Branch of the Pharmaceutical Society was held on December 11, Mr. H. Berry (president) in the chair, when Mr. H. N. Linstead, secretary of the Society, read a paper on *The Employment Problem in Pharmacy and its Bearing on Apprenticeship* (see p. 733). In the discussion which followed, Mr. Berry said that Mr. Linstead had made out a case for a limitation of apprentices, and the only way in which this could be done was by the raising of the standard of the Preliminary examination. Mr. G. Knowles raised the question of dispensing by doctors. Many doctors would be glad to stop dispensing, but patients would never be content to pay a fee for advice only. Mr. W. F. Gardner hoped that the time would come when the sale of all drugs would be a monopoly for the pharmacist. Mr. George Hampton asked if the inspectors appointed by the Society under the Pharmacy Acts were qualified pharmacists; if they were not it might be well to have qualified men. He also raised the question of certain proprietary medicines which, by a subtle alteration of the label, were able to evade stamp duty. Mr. E. J. Bowen regretted that the educational regulations were such as to make it practically impossible for a man who had passed the Chemist and Druggist examination to proceed to the new Major examination. Captain E. C. Bennison said that the Preliminary examination had been kept too low, and revision was overdue. Councillor J. Poole said that in his opinion the Society should definitely limit one apprentice to one qualified man. No one man should be allowed several apprentices. Mr. T. Foden hoped that the wholesale houses would be encouraged to take apprentices. Mr. I. Ackerman said that training in the average shop was very considerably overrated, and that the wholesale-trained man was a better pharmacist to-day.

London (S.W.).—A meeting of the South-West London Chemists' Association and Branch of the Society was held on December 6, Miss A. T. Borrowman in the chair. The speaker was Professor J. G. Wright, F.R.C.V.S., Lecturer in Pharmacology and Therapeutics at the Royal Veterinary College, who gave an interesting paper on *A Few Points of Common Interest to the Pharmacist and the Veterinarian, with the Mutual Advantages of Liaison Between the Two Professions*. It was generally felt that co-operation between pharmacy and the veterinary profession was desirable in every sense; the pharmacist receives an extensive training in *materia medica* and dispensing, and there are many preparations which the veterinary surgeon has neither time nor inclination to make, nor has he the necessary apparatus in many cases. He looks to the pharmacist for ointments, pessaries, suppositories and the like, and may rely on him for accurate percentage solutions of alkaloids. It is by this mutual co-operation that the two professional men learn to respect the vocation of each other, and to help one another. The pharmacist, when approached as to who is the person best qualified to attend the ills of domestic animals, refers to his friend the veterinary surgeon. A vote of thanks to Professor Wright was proposed by Mr. W. K. Fitch.

Australasian News

SODIUM CHLORATE AS WEED DESTROYER.—Sodium chlorate is declared by the New South Wales Director of Agriculture to be the most effective destroyer of ordinary weeds yet tried by the Department. The fact that although fatal to weeds, it is not poisonous to man or stock, and causes no inconvenience when being used is stressed. Experiments have been made on St. John's Wort, one of the worst weed pests in Australia. Arsenical preparations, salt, crude oil, and sodium chlorate were used, but the last named was the only effective treatment. Solutions of 10 per cent. and 12½ per cent. killed all the weed, while a 7½ per cent. solution killed 95 per cent. of it. Heretofore, the only reasonably effective treatment for St. John's Wort was the application of salt. This cost £20 per acre, while the cost of sodium chlorate was only 30s. per acre. Sodium chlorate has also proved satisfactory for killing khaki weed, Johnson weed, and couch grass. It does not permanently injure the soil for growth of crops, and is easily prepared. To assist land-owners in obtaining supplies, the Minister for Agriculture has arranged to import from the United States 40 tons of sodium chlorate, which will be sold at cost price (estimated at 4d. per lb. on rail Sydney).

CUSTOMS TARIFF AMENDMENTS.—Particulars of the amendments to the Customs Tariff which became operative on and from November 22, 1929, are as follows:—

	Former rates		New rates	
	British preferential tariff	General tariff	British preferential tariff	General tariff
Perfumed spirits per gall. and ad val.	40s.	50s.	50s.	60s.
Soap (a) Toilet, fancy, or medicated per lb. or ad val. whichever rate returns the higher duty	20%	30%	30%	40%
Soap (b) n.e.i.* per lb. ad val.	6d. 35%	9d. 45%	1s. 40%	2s. 55%
Oils, including medicinal oils (except essential oils) not compounded—in vessels not exceeding 1 gallon:	30%	40%	40%	50%
(A) Quarter-pints and smaller sizes per doz.	9d.	1s. 3d.	1s. 3d.	1s. 9d.
(B) Half-pints and over quarter-pints per doz.	1s. 6d.	2s. 6d.	2s.	3s.
(C) Pints and over half-pints per doz.	3s.	5s.	3s. 6d.	5s. 6d.
(D) Quarts and over a pint per doz.	6s.	10s.	6s. 6d.	10s. 6d.
(E) Over a quart per gall.	2s. £4	3s. 4d. £7 10s.	3s. £6 10s.	4s. 4d. £10
Carbide of calcium per ton				
Drugs and chemicals, viz.:				
(A) (2) Arsenate of lead:				
(a) In paste form ad val. or per lb. whichever rate returns the higher duty	10%	20% {	15% 2d.	30% 1½d.
(b) Powder per lb. or ad. val. whichever rate returns the higher duty	10%	20% {	1½d. 15%	2d. 30%
(F) Hydrogen peroxide, for every 10 vols. . . .	25% ad val.	35% ad val.	1s. 3d. per gall.	1s. 6d. per gall.
(M) Menthol and thymol per lb.		Not specified	5s.	7s.
(C) (1) Perfumery, n.e.i., petroleum jelly, n.e.i. ad val.	35%	45%	45%	60%
(2) Toilet preparations (perfumed or not), n.e.i. ad val. with additional duty if spirituous as follows:	35%	45%	45%	60%
If containing not more than 20% of proof spirit per gall. and for every additional 20% or fraction thereof of spirit per gall.	4s.	5s.	4s.	5s.

* Not elsewhere indicated.

Pharmaceutical Society of Trinidad

At a meeting of the Pharmaceutical Society of Trinidad, held on October 9, Mr. H. Joseph, secretary, regretted that the Society might with advantage have had a stall at the Health Week Exhibition to emphasise the part that pharmacy played in maintaining health. Preventive medicine, he said, was the work of the chemist and druggist, and with graphic displays along those lines they would have done much to enhance the prestige of their profession.

PHARMACY WEEK

That reminded him that Mr. Cust, of Sangre Grande, had seen him and had expressed the hope that Pharmacy Week would have been taken up this year, especially as both in Great Britain and in America the time was fixed for just the week following Trinidad's annual Health Week Campaign. The Society should take up both representation at the Health Week Exhibition and Pharmacy Week next year on similar lines to Great Britain.

CO-OPERATIVE ENTERPRISE

In referring to the president, Mr. Percy Philip, who had acquired his own business, he said that much could be done in co-operative business enterprise. The Society had member-proprietors at Couva, Arima, Belmont, West Port-of-Spain, and now their president in the heart of the city. Co-operative methods such as he had been advocating time and again would in time give them greater independence and help to hasten the day when their just claims must command recognition. Messrs. Grant, Nelson and Walcott also congratulated the president.

UNIFICATION OF PHARMACY

Suggestions were made which formed the basis of discussion with respect to the request of the Board of Examiners in Pharmacy, British Guiana, through the Chemist and Druggist Association of that colony for Unification of Pharmacy, but Mr. F. E. Grant said the difficulty was that they had no statutory powers. He suggested that a committee of the officers of the Society be appointed to make final and more concise suggestions. The meeting approved.

Herbalists in France

It is proposed to revise the regulations governing herbalists in view of a resolution recently passed by the Chamber of Deputies, and the following are among the suggestions put forward. There must be an exact definition of the domains respectively of the pharmacist and the herbalist. Reorganisation can then follow on these lines. None should practise the profession without holding a diploma awarded after a full course of systematised study and undergoing a thorough curriculum. An examination should be held by a proper examining body, but the whole to be under the direct authority of the French Government. All qualified herbalists would be able to stock for sale all vegetable drugs and herbs (except those contained in a special list in the Codex), and all mixtures and compounds labelled in such a way as to indicate their constituents. No person should manage more than one retail shop. Every person starting business or taking over one already established must lodge his diploma and his application with the local authority. A transfer would entail fresh registration. Every herbalist must be the proprietor of the business he controls, except in the special cases as now allowed, and all agreements to transfer or assign the business of a herbalist to another would be null and void if he did not hold a diploma. A herbalist could manage a business of which his son was or his sons were co-proprietors, the qualified husband of the widow of a herbalist could manage as joint guardian for the benefit of the issue of the first marriage. On the death of a qualified herbalist, his heirs, survivors, or next-of-kin would be allowed, up to the period of one year, to carry on the business, but under the management of a qualified herbalist. Any breach of the regulations to be liable to fine or imprisonment.

Legal Reports

Unqualified Vendor's Oversight.—At Marylebone Police Court, London, on December 12, Frank Vincent, Blandford Street, W.1, was summoned for "selling a liquid sold as carbolic and containing not more than 3 per cent. of phenol, and delivering it in a bottle not rendered distinguishable by touch from other bottles." Another summons against the defendant for selling the liquid not in a bottle distinctly labelled with the name of the substance, and bearing the words "Poisonous" and "Not to be taken" and the name and address of the seller was withdrawn at the suggestion of the magistrate. Inspector C. Fensom said that a Mrs. Zoller was supplied by the defendant with some carbolic disinfectant, which defendant put into a plain medicine bottle brought to the shop by her. Three days later the Zollers' child, aged four, began to cough. Mr. Zoller went to the shelf to get the cough syrup. He took the bottle of disinfectant by mistake, and gave the child a dose. The child was rushed to the Middlesex Hospital and detained there for three days. The magistrate said that it was a very serious matter, although the maximum penalty was only £5. The child might easily have died in this particular case, and he could not understand how the defendant came to serve the woman with poison in her own bottle. The whole spirit of the Act was that poisons should be sold in a bottle easily distinguishable to the touch. The defendant said that it was an oversight. The Magistrate: Yes, an oversight which might have caused death. A fine of £3 was imposed.

New Companies and Company News

P.C. means Private Company and R.O. Registered Office.

CALMON & NEATE, LTD. (P.C.).—Capital £20,000. Objects: To acquire the business of hairdressers' sundries carried on by L. E. Calmon and W. Neate as "Calmon & Neate," at 8 Gerrard Street, W. The first directors are: W. Neate, R. Calmon, L. E. Calmon and A. Neate. R.O.: 8 Gerrard Street, W.1.

NETA BOX CO., LTD. (P.C.).—Capital £1,000. Objects: To carry on the business of box makers, manufacturers of and dealers in boxes and parcels and goods carriers and wrappers, paper and articles made from paper or pulp. The directors are: A. W. Godfrey and V. N. Clark. R.O.: 2 Mackintosh Lane, Homerton, E.9.

BRITISH RAZOR BLADE CO., LTD. (P.C.).—Capital £1,000. Objects: To acquire the business carried on at 132 Victoria Road, Aston, Birmingham, as the British Razor Blade Company, and to carry on the business of manufacturers of razor blades, surgical instruments and cutlery of every description, etc. The first directors are: W. H. Turnley, A. A. Wall and Jessie B. Wall. R.O.: 132 Victoria Road, Aston, Birmingham.

Coca-Cola Co., LTD. (P.C.).—Capital £10,000. Objects: To acquire the business of manufacturers of and dealers in essences and cordials carried on in England by the Coca-Cola Company, Incorporated in Atlanta, Georgia, U.S.A., together with the English trade mark "Coca-Cola," used in connection therewith, and to carry on the same and the business of manufacturers of and dealers in liquors, spirits, minerals, aerated and other waters and beverages, chemists, druggists, etc. The subscribers are: R. Horsey, Biltmore Hotel, New York, vice-president Coca-Cola Co., and F. A. S. Gwatkin, 31-4 Basinghall Street, E.C.2, solicitor. Solicitors: McKenna & Co., 31-4 Basinghall Street, E.C.

G. B. KENT & SONS, LTD., have declared the usual dividend at the rate of 5½ per cent. per annum upon the cumulative participating preference shares for the six months ended September 30, 1929.

SOHO, LTD.—The directors of Soho, Ltd. (formerly Amalgamated Photographic Manufacturers, Ltd.), have declared a final dividend of 4 per cent. on the "A" preference shares, making 8 per cent. for the year 1929, and an interim dividend of 2½ per cent. on the "B" preference shares.

BALNEO PRODUCTS (LONDON), LTD.—At a meeting held in London on November 27 it was resolved that this company be wound up voluntarily. Miss M. E. Thomson, 19A Coleman Street, London, E.C.2, was appointed liquidator.

COMPANIES WHICH MAY BE WOUND UP.—The under-mentioned companies will, unless cause is shown to the contrary, be struck off the register and the companies dissolved three months after November 26: Durbin's Drug Stores, Ltd.; Elfin Flasks, Ltd.; Fuller's Earth Mining Corporation, Ltd.

SALTRATES, LTD.—Mr. Justice Bennett, in the Chancery Division on December 16, had before him the petition of the Attorney-General for the compulsory winding up of Saltrates, Ltd. Mr. Buckmaster said the Crown had obtained judgment against the company for £42,000 on the assessment of a member for super-tax in the name of the company. The company did not appear on that petition, which was not opposed. His lordship: "Take your order."

TAYLORS DRUG CO., LTD.—The profit for fifteen months to September 30, 1929, was £69,167 (against £42,033 for the previous twelve months). A final dividend of 6½ per cent. on ordinary shares—all held by Taylors (Cash Chemists) Trust—is declared, making 12½ per cent. for fifteen months (against 9½ per cent. for year); and £36,974 forward, compared with £36,671. The rise in profits is attributed to extensions at Burley Hill factory and co-ordination of buying, manufacturing, and clerical work of the company with that of Squire & Co. (Birmingham), now Taylors (Cash Chemists), Midland.

COLOUR SNAPSHOTS (1928), LTD.—Mr. Justice Bennett, in the Chancery Division of the High Court, on December 9, ordered the compulsory winding up of this company on its own petition. Mr. Arthur Sims, for the company, said that it had a paid-up capital of £210,000. A number of actions were pending against the company. Irregularities were alleged to have been committed by the late managing director, who was no longer a director. The board decided to put the position before the principal creditors and to present the petition. Negotiations were pending for what the board conceived to be a very advantageous realisation of a number of patent rights and other property which the company held. If a compulsory winding-up order were made, no doubt the official receiver would be able to continue those negotiations. The board had obtained a report from Sir William McLintock as to the affairs of the company, and particularly in relation to the alleged irregularities of the late managing director. As a result the creditors' meeting was held, and the company had no option but to present the petition.

Bankruptcy Reports

Re D. & J. MISELL (David & Julian Misell, trading as), 10 Rangoon Street, Crutched Friars, London, E.C., chemical merchants. The application of the debtor, David Misell, for an order of discharge was again before Mr. Registrar Mellor, on December 13, at the London Bankruptcy Court. The firm failed in November 1928 with liabilities £2,226, and a dividend of 1s. 2d. in the £ is likely to be paid. At the previous sitting a solicitor on behalf of the debtor David stated that the Jewish Board of Guardians and other friends were willing to help the debtor if he were in a position to make a fresh start in business, and the application for his order of discharge was adjourned to enable evidence to be produced of such willingness to grant assistance. The solicitor now handed a letter from the Jewish Board of Guardians, together with other letters, to the Registrar, bearing out the statements relating to the offers of assistance, and stated that the debtor already held representative orders which would carry him a long way if he were allowed to start again as a chemical merchant. The Registrar remarked that a previous failure was recorded against the debtor. The solicitor: Yes; but that was 30 years ago, and a lot of things have happened since then. (Laughter.) His Honour: Very good. I suspended the discharge of the other debtor (Julian Misell) for seven days. I shall suspend this debtor for one month. Order entered accordingly.

Pharmaceutical Society of Ireland

Council Meeting

THE monthly meeting of the Council of the Pharmaceutical Society of Ireland was held at 67 Lower Mount Street, Dublin, on December 10, Mr. F. J. Fitzpatrick (president) in the chair. The following members of the Council were also present:—Mr. Denis J. Nugent (vice-president), Dr. Michael Ryan (treasurer), Dr. J. A. Walsh, Dr. J. A. Mitchell, Sir Thomas Robinson, Messrs. John Smith, Joseph Gorry, Patrick Brooke Kelly, J. J. Roche, P. D. Larkin, T. Costello, P. A. Brady, Michael J. Kieran, Thomas J. Doyle and P. Kieran. Messrs. Patrick Liston, David Warwick, and Patrick J. Fielding sent apologies for non-attendance.

Mr. Fred Storey, president of the Pharmaceutical Society of Northern Ireland, a former member of the Council, attended the meeting. He was introduced by the president, and received an ovation. Mr. Storey occupied a seat between the president and the vice-president during the proceedings.

DEATHS

The PRESIDENT said that since their last meeting he was sorry to say their late registrar, Mr. A. T. Ferrall, had passed away. Mr. Ferrall was known to most of those present as an efficient official, and he was a friend to each one of them when they were students. He (the president) had sent a letter of sympathy on behalf of the Council. Mr. Ferrall had expressed a wish that no flowers should be sent to his grave, but they sent a laurel wreath as a tribute to Mr. Ferrall's long and faithful service. Mr. John Smith, Sir Thomas Robinson, Mr. Warwick, Dr. Walsh and himself represented the Society at the funeral. He proposed: "That the Council of the Pharmaceutical Society of Ireland expresses its feeling of deepest regret at the death of the former registrar, Mr. A. T. Ferrall, and its sympathy with Mrs. Ferrall and her family." The resolution was passed in silence, those present standing.

The registrar submitted letters from Mr. Denis J. Nugent, Mr. Joseph Gorry and Mr. Ferrall (son of the late Mr. A. T. Ferrall), thanking the Council for their expressions of sympathy in recent bereavements.

THANKS FOR GIFTS

On the motion of Dr. RYAN, seconded by Dr. WALSH, a resolution was passed thanking Mr. W. H. Martindale, Ph.D., Ph.C., F.C.S., London, W.1, for his generous gift of the two volumes of the "Extra Pharmacopœia."

The PRESIDENT said Mr. Kerr had been overhauling their library. He was a very sturdy beggar, and he had applied for contributions to some of the publishing firms in England.

On the motion of Dr. RYAN, seconded by Dr. WALSH, a resolution was also passed offering the grateful thanks of the Council to the Editor of THE CHEMIST AND DRUGGIST for his very generous donation to the library.

IRISH PHARMACISTS IN SOUTH AFRICA

The registrar submitted a letter from Mr. Samuel Hooey, M.P.S.I., Volksrust, South Africa, who wrote:—"I sincerely hope your Society will establish reciprocity with South Africa, so as to allow your licentiates the privilege of coming out here should they so desire and not to be placed in the position that legally their qualifications have no standing in South Africa other than an ordinary apprentice. . . ."

The VICE-PRESIDENT suggested that they should endeavour to further the interests of their licentiates abroad by promoting reciprocity.

The PRESIDENT said it would be time to raise the matter when they were in a position to grant reciprocity to South Africa.

The REGISTRAR said he had explained that they were hoping in the near future to get legislative powers to have reciprocity and that he was sure the Council would do all they could.

CHANGE OF NAME

The REGISTRAR submitted a letter from Mrs. Annie Evelyn Buchanan, Ph.C. (née Wright), Portrush, submitting marriage certificate, and desiring that her name should be changed in the Register.

CHANGES OF ADDRESS

The following notified changes of address:—

Mr. John Beatty, Ph.C., to Ivy Lodge, Ballyholme Road, Bangor, co. Down; Mr. John C. Heffernan, R.D., to Ennis Drug Stores, O'Connell Square, Ennis; Mr. F. M. Hartnett, Ph.C., to the Medical Hall, Portarlington; Mr. John K. Carville, Ph.C., to c/o Lester's Medical Hall, Cork; Mr. M. J. O'Rourke, assistant, to 97 George's Street, Dun Laoghaire; Mr. S. T. Smith, Ph.C., to 1 Ard Lorcain, Stillorgan, co. Dublin; Mr. Robert J. Hardy, Ph.C., to 1 Rathmines Terrace, Dublin; Mr. F. Storey, A.R.D., to 73, Ann Street, Belfast; and Mr. T. H. H. Bennett, Ph.C., to Summerhill House, Cobh.

PRELIMINARY REGISTRATION

The following who submitted certificates from other bodies, were admitted to preliminary registration:—

Miss Jeannette E. O'Driscoll, Enniskean, co. Cork; Mr. Arthur Elyan, 5 Monerca Terrace, Cork; Mr. Gerald O'Brien, 24 Cabra Park, Phibsborough, Dublin; Mr. Gerald I. Riordan, Glencove, Laurel Hill Avenue, Limerick; Mr. James Keane, Larkhill House, Sligo; Mr. Philip P. McArdle, Rampart, Jenkinstown, Dundalk; Mr. Anthony G. Garty, The Pharmacy, Charleville, co. Cork.

REPORTS FROM COMMITTEES

Reports from the Law Committee and the House Committee were received and adopted.

ELECTION OF EXAMINERS

On the motion of the VICE-PRESIDENT, seconded by Mr. BRADY, Mr. T. J. Burke, B.A., M.P.S.I., was re-elected as examiner in pharmacy for the ensuing year, and Mr. M. V. Sargent, A.R.C., Sc.I., M.P.S.I., was re-elected as examiner for the Registered Druggist examination. On the motion of the VICE-PRESIDENT, seconded by Dr. RYAN, Mrs. Mary Murphy, B.A. (honours), higher diploma in Education, the Hotel Pelletier, Dublin, was elected as examiner for the Preliminary examination. There were three other candidates for this position.

INVESTMENT OF FUNDS

On the motion of Dr. RYAN, seconded by Dr. WALSH, it was decided that £500 of the funds of the Society at present on deposit be invested in National Loan.

On the motion of the VICE-PRESIDENT, seconded by Mr. BRADY, it was decided that £341 of the funds of the Benevolent Fund be invested in Savings Certificates and National Loan.

ERASED FROM THE REGISTER

It was decided that the following names be erased from the Register:—

Mr. Wm. J. Cooper, Ph.C., Wygram House, Wexford; Mr. A. J. A. Lennan, Ph.C., 84 Queen's Street, Belfast; Mr. A. E. O'Connell, Ph.C., 8 North Strand Road, Dublin; Mr. Samuel Bredin, Ph.C., Govart, Derry; Mr. J. Knox, Ph.C., Rathfriland, co. Down; Mr. H. R. Warden, Ph.C., Newtownards, co. Down; Mr. John A. Woodside, Ph.C., Ballymena; Mr. Hatchell Whitby, Ph.C., Palmerston Gardens, Rathmines, Dublin; Mr. J. A. S. Anderson, R.D., Killyleagh, co. Down; Mr. Gabriel Montgomery, R.D., Lisnaskea; and Mr. John J. Murtagh, R.D., Arva, co. Cavan.

MEMBERS ELECTED

The following were elected to membership of the Society:—Mr. David J. O'Brien, Ph.C., 57 Harcourt Street, Dublin; Mr. M. MacManus, Ph.C., 5 Dolphin's Barn, Dublin.

MEDICINAL SPECIALITIES IN ITALY.—The Italian Government has further extended to April 30, 1930, the period during which medicinal specialities and similar products may be registered and has also extended to December 31, 1929, the period for compliance under benefit of the lower registration fee.

EMPLOYMENT IN PHARMACY

Abstract of a Paper entitled "The Employment Problem in Pharmacy and its Bearing on Apprenticeship," read by H. N. LINSTEAD, Ph.C., at a meeting of the Birmingham Pharmaceutical Association on December 11

DURING the six years 1923-28 we have added 2,570 new names to the Register of Chemists and Druggists (after allowing for deaths), an average of about 430 a year. The figure for 1929 is 954. During the same period we have registered 10,719 men and women as apprentices or students, an annual average of nearly 1,800. At the end of this year there will be 22,614 registered pharmacists and some 9,000 registered apprentices in existence. Before turning to the future, it will be useful to see whether at the present moment there is any considerable amount of unemployment among pharmacists. With this object in view I addressed an inquiry to a number of pharmacists in London and the provinces; here is a summary of their replies:—

London.—One firm states that their replies to box-number advertisements has remained at an average of 60 for the last five years. They have, however, not advertised during the last year. A prominent London pharmacist records that he has received a larger number of applications than his average, especially during the last twelve months. Another pharmacist, at a large London hospital, records a definite increase, and mentions that he has received many letters, particularly from women, asking for posts.

Leicester.—No noticeable unemployment among qualified men. There is some among unqualified men, but not among the best type of those.

Manchester reports very little unemployment.

Liverpool says that the unemployment among the newly qualified is above normal.

In Birmingham, I am told that there is little, if any.

Cardiff and Swansea.—Practically none, in spite of the trade depression.

Nottingham.—My correspondent, a retailer, notes an absence of unemployment.

West Country.—I am told that for one particular vacancy advertised recently an unusually large number of applications was received.

Glasgow.—Here, and in Scotland generally, there is a very definite surplus of qualified men.

If these replies are taken as representative of the country as a whole, they give the general impression that we are now at about the limit of our absorptive powers. This is borne out by the replies which I received from two large multiple-shop firms, whose businesses cover between them the best part of England, Scotland and Wales.

It will be useful to see if we can find reasons for the remarkable fact that in 1913, before the war, there were 16,608 registered chemists and druggists, while to-day, without any great number of unemployed, the figure is 22,614. How have we managed to absorb 6,000 in the last few years? Let us first consider the retail trade. Taking it as a whole, I believe it to be reasonably prosperous just now. It may throw some light on this question of absorption if I give the results of a postal inquiry which I addressed to 153 pharmacists who qualified in the years 1923 and 1924. I asked them to tell me their present employment. I also give some figures published by Professor A. G. Du Mez, of the Maryland College of Pharmacy in the "American Druggist" of October last: both sets of figures are percentages:—

—	H.N.L.	Du Mez
Retail	58	69
Wholesale and manufacturing	10	4
Hospitals	10	2
Representatives	6	1.5
Teaching	4	2
Unclassified	1	8.5
Out of pharmacy	11	5.0
Without addresses and work un-known..	—	8.0

I believe that there has been an appreciable increase in the number of qualified men "on the road" recently, while I am hopeful that the effect of the Local Government Act of 1929 in handing over to the county and county borough councils the control of the poor-law hospitals (in London County alone some 58,000 beds will be transferred) will open up many more posts to qualified men—and not merely posts, but careers. Those classified as "no longer in pharmacy" are principally women who have forsaken pharmacy upon marriage. If we take 60 per cent. as about the average number of qualified people who go into the retail side of our calling, we still have to explain the fact that the 10,000 shops in England and Scotland have been absorbing about 300 qualified men a year. I believe these influences to be at work in the retail—the employment of more qualified men by the big dispensing businesses and departmental stores; the policy of at least one great multiple-shop company of finding a post for all its apprentices after qualification; the opening of new businesses first by young men almost immediately after qualification on capital lent by friends, and secondly by older men who have sold out to chain-stores or to one of the newly formed combines. I would claim that a definite factor has been the more stringent enforcement of the Pharmacy Acts by the Pharmaceutical Society, particularly against the qualified man who has been letting pharmacy and the public down by running branches with unqualified men. What of the future?

AN ANALYSIS

I have had the "Situations Wanted" columns of "The Pharmaceutical Journal" analysed for some years back. The month when fewest people are out of work is December. There is a quick rise in January, after the Christmas rush is all over, then a gradual fall off until June, when the demand for locums causes a further fall until the end of September. In October, the end of the holiday season and the results of the July and September examinations bring the unemployment figure up to its high-water mark, and there is then a quick fall off until the Christmas minimum is reached. Turning to the next few years, the number of registrations as apprentices or students gives us some indication of the number of qualified men we may expect to turn out. The figures for recent years are:—1923, 1,602; 1924, 1,680; 1925, 2,049; 1926, 2,413; 1927, 1,764; 1928, 1,211; 1929, 1,375. What proportion of those who register as apprentices and students fail to go through and qualify? The Society's records show that there has been in the past a leakage of about 30 per cent. between registration and qualification. But of those who once enter for the Preliminary Scientific examination the leakage is only 15 per cent. This figure I obtained after obtaining from a number of schools training students for the Preliminary Scientific examination lists of their students in the years 1923 and 1924. From our records I have traced the progress of 270 of these, and I find that about 15 per cent. have definitely dropped out. What are, perhaps, more interesting are the opinions of some of the teachers—e.g., "Very few pharmacy students fail to pass the Qualifying examinations." Assuming a deduction as high as 25 per cent., and an average time of five years between registration and qualification, we are likely to get figures of well over the thousand mark for the next three years, with an annual erasure rate of about 400. There is, of course, some leakage after qualification, but it is not more than 5 per cent. And I see our being faced with 1,800 more qualified men to absorb during the next three years.

POPULATION IN TERMS OF SHOPS

As you know, in most European countries there is a limitation of pharmacies to population. A friend of mine in Jugo-Slavia tells me that there, with a statutory limit of shops, the figure is one to every 15,000 inhabitants. Last year I had the figures for Great Britain worked out from the Society's records. It was difficult to be sure that every shop fell within the census-area to which it was allocated, but the figures are substantially accurate. They show that the 10,000 shops in Great Britain serve each an average population of 4,279. But this average varies:

	Population (1921 census)	Number of shops (January, 1928)	Average number of persons per shop
Great Britain ..	42,767,739	9,994	4,279
South Shields ..	116,667	20	5,833
London ..	7,476,168		
(with adjacent county boroughs)	1,381,829		
	8,857,997	1,700	5,210
Plymouth ..	209,857	41	5,118
Middlesbrough ..	131,103	28	4,682
Sheffield ..	490,724	114	4,305
Newcastle-on-Tyne ..	274,955	66	4,166
Birmingham ..	919,438	222	4,142
Stockport ..	123,315	30	4,110
Halifax ..	99,129	25	3,965
Glasgow ..	1,034,174	277	3,733
Bradford ..	285,979	78	3,666
Norwich ..	120,653	33	3,656
Liverpool ..	803,918	225	3,569
Hull ..	287,013	83	3,458
Southampton ..	160,997	47	3,425
Manchester ..	730,551		
Salford ..	234,150		
	964,701	284	3,396
Leeds ..	458,320	139	3,297
Dundee ..	168,315	53	3,176
Birkenhead ..	145,592	48	3,033
Southend-on-Sea ..	106,021	36	2,945
Aberdeen ..	158,969	69	2,304
Edinburgh ..	420,281	208	2,021
Blackpool ..	99,640	60	1,661
Brighton ..	142,427	90	1,582
Bournemouth ..	91,770	61	1,504

Assuming a population of 10,000 people to be necessary to support one shop, carrying on as a true pharmaceutical business, you can see to what straits we have been driven in this country and why side-lines are now the backbone of the ordinary retail pharmacy. The only outlet that I can see for our surplus qualified men during the next few years is the opening of more shops, and that means the extending of this non-pharmaceutical pharmacy which is from many points of view so deplorable. One small matter which seems to need emphasising reflects upon employers to some extent—the answering of applicants. I gather that a reply to unsuccessful applicants is frequently not sent, even when a stamped envelope is enclosed. This I regard as being an inexcusable breach of courtesy.

SUGGESTED REMEDIES FOR UNEMPLOYMENT

What of the remedies? To some extent they overlap. They are:

(1) The restriction by the Government of the number of pharmacies to the strictly pharmaceutical needs of the country. This would, of course, carry with it the restriction of the number of pharmacists.

(2) The restriction by the Government of the whole practice of pharmacy to pharmacists—not merely the sale of poisons, but the practice of pharmacy properly so called.

(3) The limitation of the number of entrants.

The first two of these are scarcely within the range of practical politics for our time. The first remedy, restriction of pharmacies to population, secures for the individual pharmacist an assured position, both finan-

cial and social, but it does so at a heavy cost. The pharmacy is scarcely the property of its owner. When he dies he cannot leave it as he wishes; he cannot sell it to anyone without permission; the Government steps in and arranges what is to become of it. Government inspection and control becomes essential and strict, with the penalty of forfeiture always hanging over the owner's head. A man may waste the best years of his life waiting to purchase a pharmacy.

The restriction by the Government of the practice of pharmacy to pharmacists is something which I hope is not so remote as the remedy of the limitation of the number of shops, but it is beset with many difficulties. Great Britain is practically the only country in Europe which permits anybody to dispense medicines for sick people. Apart from the limitations imposed by the National Health Insurance Act, any uninstructed person who cares to buy a chemist's shop or drug stores may dispense doctors' prescriptions, and, in fact, exercise three-quarters of the functions which by right belong to the qualified man alone. The solution of the problem is bound up with such other problems as continuance of dispensing by doctors and the recognition of the best interests of people who now sell drugs although unqualified to do so.

The last of the three remedies is, as I have indicated, both obvious and not too difficult of realisation. It is the limitation of the number of entrants. I think it is not unfair to say that the policy of the Pharmaceutical Society in the past had been one of waiting upon other examining bodies. For example, we have always kept our preliminary examination just one or two steps below the standard of the medical preliminary, almost as if we tacitly acknowledged that we were a step or two lower in the educational ladder than the medical profession. We want to look at our own problem and decide it from our own point of view. We are in a position to pick those students whom we shall allow to come into pharmacy.

We want to make our preliminary examination one which the ordinary secondary school pupil of good average ability can take without trouble at the end of his school period. Certainly the possession of a School Certificate should be a minimum qualification. Personally, I believe that within a very few years we shall find ourselves in a position to require matriculation as our entrance examination. I do not think the advance from our present standard to matriculation standard will have the effect of preventing the right type of boy coming into pharmacy. As this represents at the moment our one practicable way of dealing with the unemployment problem of the next ten years, I think it is something which demands the very closest attention and the widest discussion among all those in pharmacy.

What I have said may have appeared discouraging to students. I hope they will not regard it as unduly so. I think there will always be room in pharmacy for men with good training and general education who are prepared to work hard. A correspondent says that there is no noticeable increase in the difficulty in getting the right type of man, but there is of the man with good shop experience, which is probably due to the examinations being taken earlier and apprenticeship begun later. My correspondent goes on: "It is not always an economic proposition to pay a man the salary that his qualification may demand when he is entirely devoid of experience, or while he is gaining that experience at your expense." On the other hand, I think that employers sometimes expect too much from a qualified man. They must remember that qualification is little more than the beginning of experience. This is particularly true nowadays when shorter apprenticeships than in the old days are the rule, and when so much less dispensing, and particularly so much less manufacturing, is done in the retail shop.

TREATMENT OF SNAKE-BITE.—Writing to "The Lancet" (No. 5536), a correspondent describes a case of snake-bite which occurred near Plymouth apparently during last September. The treatment consisted of injections of adrenalin, strychnine and pituitrin, with "large quantities of brandy to drink"; later potassium permanganate was rubbed in locally.

Business Changes

MR. V. W. WOOD, chemist and druggist, has opened a business at 34 Southey Avenue, Sheffield.

NILDE (PARIS) AGENCY, LTD., are opening new offices and showrooms at 258 Euston Road, London, N.W.1.

WINHARD, LTD., Holborn Viaduct House, E.C.1, are removing their offices to 32 Percy Street, London, W.1, on December 23.

MESSRS. W. S. CORKILL and TREVOR JONES, chemists, have acquired the business of the late Mr. W. Grace, College Road, Crosby.

MR. GEORGE F. THOMPSON, chemist and druggist, has purchased the business of Mr. F. H. Holyoak, 551 Ecclesall Road, Sheffield.

BANNISTER & THATCHER, LTD., chemists, Walsall, have purchased the business of Mr. Frank Brattelle, chemist and druggist, Rhos-on-Sea.

F. G. WELLS, chemists (Messrs. F. G. Wells and J. E. Evans), 156 Stockwell Road, London, S.W.9, have acquired the business of Rayner & Son, chemists, Uxbridge.

MR. K. B. MAVLANKAR, chemical merchant, Trout Road, Yiewsley, is removing his city offices from 98 Great Tower Street, E.C.3, to 40 Hatton Garden, London, E.C.1. Telephone: Holborn 0211.

Trade Notes

CLOSED FOR STOCKTAKING.—Agfa, Ltd., Vintry House, Queen-Street Place, London, E.C.4, inform us that their offices and warehouse (Lawrence Street, W.C.1) will be closed for stocktaking on January 1, 1930.

MR. NORMAN CHEVERS, Johannesburg, who is again on a visit to this country, is anxious to get in touch with manufacturers interested in South African trade. Mr. Chevers may be addressed c/o THE CHEMIST AND DRUGGIST. [Corrected note.]

A BRITISH EMPIRE TRADE EXHIBITION is to be held at Buenos Aires, from February 18 to April 2, 1931. An illustrated booklet giving full particulars regarding the event is obtainable from the general manager, 5 Parliament Mansions, Orchard Street, Victoria Street, London, S.W.1.

POTTER & MOORE, LTD., Lavender House, London, E.8, ask chemists to accept their apologies for late deliveries of their goods, caused, as is explained elsewhere in this issue, by unprecedented volume of business. The company also take the opportunity of wishing their customers the season's greetings.

THE METHYLATING CO., LTD., Kinnaird House, Pall Mall East, London, S.W.1, have published a brochure of interest to all motorists as it deals with the use of methylated spirit for decarbonising internal combustion engines without dismantling and as an antifreeze. Copies may be obtained on application.

ADDITION TO LIST OF ANTI-SYPHILITICS.—The Minister of Health announces that Metarseno Argenticum (May & Baker, Ltd., Battersea, London, S.W.11) has been added to list 35, as amended by lists 35 A-D. The Minister is advised that the best results are obtained with this drug if administered subcutaneously or intramuscularly.

DRUG MAP OF THE WORLD.—S. B. Penick & Co., drug importers, exporters, etc., 115-117 Fulton Street, New York, send us a copy of a drug map issued by the National Wholesale Drug Association, in connection with Pharmacy Week. The map shows the geographical location of the most important drugs in the world, and its object is to set forth some of the professional aspects of pharmacy in the interests of the public.

CHRISTMAS HOLIDAYS.—In addition to those mentioned in the *C. & D.*, December 14 (p. 705), we understand that the following wholesale houses will be closed on the dates mentioned:—Johnson & Sons, Manufacturing Chemists, Ltd., London, N.W.4, December 25 and 26

(urgent orders will be executed on December 27 and 28); J. F. Macfarlan & Co., London, E.1, December 24 (noon), 25, 26, and January 1 [corrected note]; Mallagh & Co., London, S.E.1, December 25, 26, 27 and 28; William Ransom & Son, Ltd., Hitchin, December 25 and 26.

UNDER the heading of "Trawler's Find. Two Cases of Perfume. Supposed Smuggling," the "Sydney Morning Herald" describes how a trawler recovered off Botany Bay 4,380 bottles of Ashes of Roses perfume and a quantity of brilliantine. A Bourjois & Cie, Ltd., 4 Water Lane, London, E.C.4, inform us that these goods were not, as stated, part of a "smuggling plot," but some six months ago a serious fire occurred in two of the bonded warehouses in Sydney where the company's merchandise was stored and a quantity of it which had been damaged was eventually dumped into the sea at Sydney Heads.

Trade-Mark Applications

The figures in parentheses refer to the classes in which the marks are grouped. A list of classes and particulars as to registration are given in "The Chemist and Druggist Diary," 1929, p. 333.

(From "The Trade Marks Journal," December 4, 1929.)

"SUPERFLORO FLOWERWAX" on oblong shape; for perfumes (48). By Superfloro (1929), Ltd., Post Office Building, Charles Street, London, S.W.1. 507,166. (Associated.)

"FALSEL"; for artificial teeth-cleaning preparations (48). By A. E. Humphreys, 11 Pendleton Road, Walton, Liverpool. 506,978.

(From "The Trade Marks Journal," December 11, 1929.)

"PAVERIN"; for manufacturing chemicals, etc. (1); and for medicinal chemicals (3). By E. Merck, Frankfurterstrasse 250, Darmstadt, Germany. 507,321/322. (Associated.)

"SEROPAN"; "SERIPAN"; "RONILLA"; for all goods (1). By I. G. Farbenindustrie A.G., Mainzer-Landstrasse 23, Frankfurt-on-Main, Germany. 507,617/618/619. (Associated.)

"BERNABÉ FERNANDEZ" facsimile signature; for medicinal food (3). By B. F. Sanchez, 49 Corredora, Montilla, Cordoba, Spain. 504,315.

"MENSTOLIN"; for a menstruation medicine (3). By Boots Pure Drug Co., Ltd., 37 Station Street, Nottingham. 503,128.

"STELLA-VITA"; for medicated pastilles (3). By G. Wallace, 4 Cumberland Street, London, N.W.1. 505,676.

"CALLS"; for throat pastilles (3). By C. P. Mayes, 2 Wise Road, Stratford, E.15. 506,301.

"LESTRONA"; for medicinal chemicals (3) and perfumery, etc. (48). By H. Lester & Son, 1 Bridge Street, Nuneaton. 507,482/483. (Associated.)

"PEROXTIK"; for medicinal chemicals (3) and perfumery, etc. (48). By A. H. Cox & Co., Ltd., 93 Lewes Road, Brighton. 507,601/602.

"PRIEMSIL"; for Fuller's earth, etc. (4). By W. Prich & Co., G.m.b.H., 6 Fürst Leopoldstrasse, Magdeburg, Saxony, Germany. 505,624.

"MONTAFLOR"; for essential oils (4). By Bruce Starke & Co., 16 Water Lane, Great Tower Street, London, E.C.2. 507,327.

"THREADLITE"; for cinematograph apparatus and parts (8). By Kodak, Ltd., Kodak House, Kingsway, London, W.C.2. 507,074.

"SPEE-JAX"; for surgical instruments, etc. (11). By Halliwell-Shelton Electric Corporation, 113-119 Fourth Avenue, New York, U.S.A. 506,084.

"AIRCOL"; for surgical instruments, etc. (11). By The St. Albans Rubber Co., Ltd., Finsbury Court, Finsbury Pavement, London, E.C.2. 507,550. (Associated.)

"PREMALAC"; for milk and milk preparations (42). By Cow & Gate, Ltd., Cow & Gate House, Stoke Road, Guildford. 507,396.

(From "The Trade Marks Journal," December 18, 1929.)

"ASCARINE"; for a worm medicine for animals (2). By C. J. Hewlett & Son, Ltd., 35 to 42 Charlotte Street, London, E.C.2. 506,606.

"DUNSECT"; for insect destroyers (2). By E. Dunstone, 1 Sunnyside Road, Weston-super-Mare, Somersetshire 507,886.

"SOLVONOL"; for a whooping cough medicine (3). By Chemische Fabrik Helfenberg A.G. vorm Eugen Dieterich, 13 Karl Dieterichstrasse, Helfenberg, Dresden, Germany. 502,479.

Births

Notices for insertion in this column must be properly authenticated.

MARSHALL.—At Gowrie House, Dunoon, on December 12, the wife of James Marshall, chemist and druggist, of a son.

Marriages

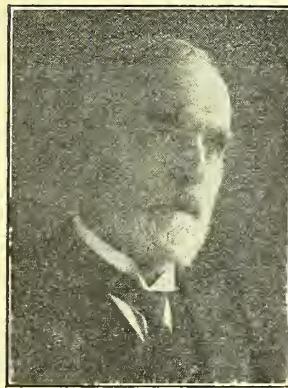
CARSS—TURNER.—At the Station Hotel, Dumfries, on December 3, by the Rev. J. E. McIntosh, M.A., assisted by the Rev. James A. Ewing, M.A., George W., eldest son of Mr. W. Carss, Sunderland, to Jessie, youngest daughter of ex-Provost A. Turner, J.P., Ph.C., Glensorrel, Maxwelltown.

SNIJDERS—MORTIMER.—At Bloomsbury Register Office, London, on December 13, F. J. H. Snijders to Betty, daughter of Mr. Arthur Mortimer, barrister-at-law and pharmacist, 5 South Square, Gray's Inn, W.C.1.

WOOLLEY—SCHOFIELD.—At St. Mary's, Balderstone, Rochdale, on December 17, George Stephen, only son of the late Mr. E. J. Woolley and Mrs. Woolley, Windy How, Hale, to Joan Roberta, youngest daughter of the late Mr. R. W. Schofield and Mrs. Schofield, Hill House, Rochdale.

Deaths

BLENCOWE.—At his residence, Brackley Croft, West Wickham, on December 11, Mr. Arthur Benjamin Blencowe, senior partner of Paines & Reid, produce brokers, 32 Fenchurch Street, London, E.C., aged seventy-two. The firm with which Mr. Blencowe had been connected as partner was founded as Kensington & Paine, at 36 Mincing Lane, on November 14, 1815. It became known later as Kensington, Paine & Young, and then as Paines & Young, when Mr. Blencowe entered as a junior in 1876. After February 1, 1878, the title of the firm was changed to Paines & Reid, and on November 1, 1915, Mr. Blencowe was admitted



MR. A. B. BLENCOWE

partner, close on the centenary of the founding of the firm of Kensington & Paine (Mr. W. C. Radermacher becoming a partner in 1922). Mr. Blencowe was the oldest member of the cocoa trade in Mincing Lane, and at a call of the London Cocoa Terminal Association, on December 12, the Mincing Lane cocoa trade passed a vote of condolence with the firm. The late Mr. Blencowe was well known and esteemed personally in Mincing Lane circles, and many letters expressing appreciation and sympathy received by the firm testify to the standing which he enjoyed. His death removes a characteristic figure representative of a former generation of brokers. The funeral took place at West Wickham Church on December 14.

BRIMSON.—At a London Hospital, on December 16, Mr. George Frederick Brimson, chemist and druggist, 10 Bowen Road, Harrow, late of Addlestone, aged sixty-one. Interred at Harrow Cemetery.

GIBSON.—At South Shields, recently, Mr. J. T. Gibson, for fifty-four years associated with the management of B. Williamson & Co., chemists, Market Place, aged seventy-four. On the retirement of Mr. Bamford Williamson, chemist and druggist, Mr. Gibson and a partner took over the business.

Personalities

MR. LAWRENCE JONES, chemist and druggist (The Uganda Co., Ltd., Kampala, Uganda), will be on leave in this country shortly, and may be addressed at 148 Parrin Lane, Merton Green, Eccles, Manchester.

MR. H. POTTER, who has recently retired after forty-three years' service with Burgoynes, Burbidges & Co., Ltd., manufacturing chemists, East Ham, London, E.6, as manager of the sundries and patent-medicines departments, was the recipient on December 18 of a gold watch and smoker's companion from the directors and employees. Mr. R. G. Halstead (governing director) made the presentation, and Mr. Potter, who has scarcely recovered from a lengthy illness, briefly replied.

MR. REES VERNON LLOYD, B.Pharm., Ph.C., who commences his duties on January 1, 1930, as head of the Welsh College of Pharmacy, Cardiff, is a native of South Wales. Mr. Lloyd received his early education at Pontypridd County School, and later was apprenticed to Mr. Tudor L. Williams, chemist and druggist, Cilfynydd, Pontypridd. He afterwards spent two and a half years as an assistant to Mr. T. J. Morris, F.S.M.C., chemist and druggist, Muswell Hill, London, N. In 1923 he was Fairchild prizeman for Wales, and a year later he won the senior Jacob Bell scholarship. Mr. Lloyd in October 1924 became a student at the Pharmaceutical Society's School of Pharmacy, and passed the Qualifying examination nine months later. Continuing his studies at the school, he passed the "Major" in 1926, winning also several prizes and certificates. In 1929 he graduated as a Bachelor of Pharmacy of London University. From 1927 to the present time he has held the post of senior assistant in pharmacy at the School of Pharmacy, and has also been in charge of the examination dispensaries of the Society and an assistant to the board of examiners. Mr. Lloyd, who is twenty-seven years of age, has done research work on colloids.

Wills

MR. JOHN HENRY TAYLOR, of 54 Highbury, Newcastle-on-Tyne, pharmacist, senior director of Taylor Gibsons, Ltd., chemists, 52 Stowell Street, and chairman of John Mackay & Co. (Newcastle), Ltd., mineral water manufacturers, Corporation Street, left estate of the gross value of £7,176 17s. 1d., with net personality nil. Probate of the will has been granted to his widow, Elizabeth Ann Taylor, of the same address, the sole executrix, to whom he left all of his property absolutely.

MR. WILLIAM HENRY PERKIN, Ph.D., of Charlbury Road, Oxford, left estate of the gross value of £43,687, with net personality £43,365. On the decease of his wife he leaves:—

£5,000 to the Royal Society, Burlington House, W., for a "Perkin Fund," of which the income is to be applied for the general purposes of that society. £1,000 to the Chemical Society, Burlington House, W., for the publications fund of that society. After other bequests, all other his property to the president and scholars of the College of St. Mary Magdalen, in the University of Oxford, for a "Perkin Research Studentship Fund," for the endowment of one or more studentships to be awarded to post-graduate male students of universities within the British Empire.

Information Department

INFORMATION WANTED

Postal or telephone information with respect to makers or first-hand suppliers of the undermentioned articles will be appreciated.

W/1712. Amorskin (skin food)	B/1412. Plu-Vee nail-brushes
P/1112. Calcreose (London source)	(present address of makers)
C/1112. Christie's Ecinos hair cream	B/1712. Pyramid malt
S/1121. Pinofuol (London source)	B/912. Robot massage rollers
W/912. Practitioner nail-brushes	B/1712. Salvanin (for asthma)
	E/1712. Summit tooth-brushes

Observations and Reflections

By Xrayser III

Mr. Crummack's Idea

of a laboratory which should exist mainly for the purpose of solving problems that chemists and druggists have neither the time nor the facilities for attacking themselves (*C. & D.*, December 14, p. 718) has much to commend it. I have long had it in mind that provision should exist at the headquarters of the Pharmaceutical Society for this kind of thing; but it would be all to the good if a few of our chief cities could have laboratories for testing purposes and minor research work established for the convenience of chemists and druggists in those cities and the surrounding districts. In each instance there should be a research committee to control the work, and the person in charge of the laboratory would need to be capable of undertaking analyses of drugs and medicines, in addition to being skilled in practical pharmacy. It may be questioned, of course, whether the cost of realising the idea would not be prohibitive, even in the case of an important city of the size of Leeds. But there are so many ways in which useful service could be rendered by such a laboratory as Mr. Crummack suggests that it ought not to be excessively difficult to make the revenue cover the cost.

Window Display

is evidently a subject that is taken seriously by Mr. Paul Dobson, and I have been much interested in his paper on display for the chemist (*C. & D.*, December 14, p. 710). Such display is probably, as Mr. Dobson suggests, the cheapest and most effective form of advertising, i.e., in the case of a chemist's shop, but in order to be effective it needs to be undertaken systematically. My advice to chemists who wish to make the most of their shop windows for display purposes is to observe what the big drapers do, and follow their example so far as circumstances and the different nature of the business permit. Open display commends itself to me as the most satisfactory way of effectively displaying articles which it is desired to push specially. General closed or mass display appeals more to chemists who do not care to change their windows frequently, or who desire to direct attention to the varied nature of their stock. Unless dummies are used largely, mass display is costly, as Mr. Dobson points out. A useful compromise is a combination of open display as the central feature of the window, and closed display at the sides and back.

Looking Forward,

one of your correspondents (*C. & D.*, December 14, p. 723) makes a shrewd forecast of what the pharmacist may become in the course of the next forty years. Not for a moment do I think that all the changes he imagines will have come about in forty years' time, but he sets out pretty clearly what may be expected to happen if ever the practice of pharmacy becomes separate from the general business of the chemist and druggist as conducted to-day. His estimate of the probable remuneration of the future pharmacist is not extravagant, but the amount suggested might satisfy many of those who are dissatisfied with existing arrangements. Would there, however, be a sufficient number of pharmacies required to accommodate anything like the number of chemists and druggists now on the Register? I fancy not, and that the more even distribution of pharmacists which "Looker-On" prophesies will be accompanied by a considerable reduction in the number to be distributed. As a matter of fact, the more pharmacists are restricted to the practice of pharmacy, properly so-called, the greater is likely to be the diminution in their number and in the number of places where pharmacy is practised. The prospect may not seem a cheery one; but it is just as well to realise where continuing on a certain course may land us, and for those who find insufficient attraction in remuneration at the rate of £500 or £600 a year to understand how uncertain is the prospect of obtaining more by the practice of pharmacy alone.

Names Have a Strange,

even an uncanny, way of imposing themselves on us. An excellent example of our helplessness in the control of the behaviour of some of them is given by Dr. Pickles in the lecture on "Rubber Manufacture" (*C. & D.*, December 14, p. 717). From the very beginning of its career among civilised people caoutchouc was called upon to play many parts of much more significance than that of rubbing out lead-pencil marks. But from the time when Joseph Priestley quite casually directed attention to this peculiar property of the article the name of "rubber" has placed its yoke on the whole of the English-speaking peoples, and this notwithstanding that common sense affirms that it would be difficult to find an adjective more unsuitable for describing plasters, fabrics, surgical instruments, tyres, etc. It is possible that Dr. Pickles's hearers were told how Priestley came to advertise the "rubber." In any case, it may be worth while to give here Priestley's own words—in which "rubber" does not occur. They are to be found in his "Familiar Introduction to the Theory and Practice of Perspective" (1770). He writes: "I have seen a substance excellently adapted to the purpose of wiping from paper the marks of a black-lead pencil. . . . It is sold by Mr. Nairne . . . opposite the Royal Exchange. He sells a cubical piece of about half-an-inch for three shillings, and he says it will last several years."

There is Another Name,

also associated with Priestley, which exemplifies the verbal bondage in which we dwell, and by which our sense of historical values is vitiated. The usual text-books of chemistry and the encyclopaedias, with few exceptions, record that oxygen was discovered about the same time (1774-75) by Scheele, Priestley and Lavoisier. Lavoisier's name, one might almost say title—oxygen—has so firmly implanted itself on the throne of chemistry that most of us accept it as the indisputable evidence of the fact of the discovery of the substance. A few weeks ago Mr. H. A. L. Fisher, in his lecture on "An Oxford Movement," given at the Royal College of Physicians, told, in the course of his remarks on co-operative scientific inquiry at Oxford in the seventeenth century, how "John Mayow, one of the greatest names in the history of physiology, carried out his researches at All Souls, discovering oxygen and grasping the essential facts about the formation of oxides and acids." It is not possible to read Mayow's pamphlets nor the summaries of them which have appeared without recognising the truth of Mr. Fisher's statement that Mayow discovered oxygen. One of the best accounts of his researches is given in Sir William Ramsay's "The Gases of the Atmosphere"; but even he is so obsessed by the domination of the name that he is unable to apprehend that the gas was discovered in the seventeenth century as proved by the evidence he is repeating. Ramsay says "it is impossible to avoid being impressed with the clearness of Mayow's inferential reasoning. All that was wanting was the discovery of oxygen and carbon dioxide, and the identification of the first with his fire-air, and of the second with the products of combustion." On the other hand, Roscoe and Schorlemmer appreciated the full importance of Mayow's researches, and refer to his *spiritus nitro-aereus* as "another, and not inappropriate name for what we now call oxygen." We may claim a tenuous interest in Mayow's work because we are told that he died at the house of an apothecary in York Street, Covent Garden. From this we may assume that he had some interest in the apothecary's art, an assumption which is strengthened by his recognition of the practical value of his experiments on the attractions that alkalis and metals have for acids. He particularly warns the compounders of medicines to beware of the changes which may arise "for one substance may destroy the efficacy of another, and something perfectly different from the original may result." He realised the possibilities of chemical incompatibility.



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Editorial Articles

Proprietaries in Insurance Dispensing

ONE of the most remarkable phenomena in connection with National Health Insurance dispensing in England and Wales is the resigned manner in which chemists on the panel submit to depletion of the drug fund by payments for proprietary medicines, particularly those for which there are suitable equivalents in the form of non-proprietary preparations. This involves the purchase of a considerable quantity of the drugs required for insured persons at an enhanced rate, with the result that chemists, while being paid the full cost of the proprietaries, suffer loss by the discounting of their modest dispensing fees at times when, because of the occurrence of epidemics or for any other reason, there is not sufficient money to pay accounts in full. Occasionally someone directs attention to the needless prescribing of proprietaries by Insurance practitioners, and the subject may receive a certain amount of prominence, but the agitation soon dies down and no more is heard about it for a while. This is the more curious because it ought to occur to most of those who protest against the payment of inadequate fees and the discounting of these in times of scarcity that this prescribing of proprietary articles is one of the chief causes of their trouble. Similarly, external critics who see in the dispensing chemist nothing short of a greedy profiteer, and prophesy wonderful developments in National Health Insurance benefits if only he can be sidetracked, miss the main point because they are contrasting two totally different systems. They fail to comprehend why the chemist is handicapped by having, generally speaking, to dispense any medicine, proprietary or otherwise, that the Insurance practitioner chooses to order, whereas public dispensaries such as they advocate would almost certainly be encouraged to keep the drug bill down by avoiding the use of proprietary preparations. There was a reasonable prospect at the outset of the National Health Insurance service in 1913 of proprietary medicines being disallowed generally, except in cases in which there was no satisfactory non-proprietary substitute. It may be recalled that chemists were reporting in those early days how insured persons coming with their prescriptions for medicine ordered by the panel doctor were purchasing patent medicines in greater quantity than ever, because they had more faith in them and more money to spare for such purchases. The idea that doctors might order the proprietaries did not occur to anyone at that time. But the habit of prescribing them was allowed to creep in and, with the coming of the so-called "cost price" tariff, it became firmly established as we find it to-day, except in Scotland, where adherence to the original system of remuneration has been accompanied by a ban upon proprietaries. There is no doubt that, in some ways, pharmacy is better safeguarded in Scotland than in England and Wales, this disallowance of proprietary medi-

cines in National Health Insurance dispensing being one of them. Though in England and Wales we find some Insurance Committees disallowing a few proprietary articles, it is usually on the ground that they are borderline preparations which cannot properly be regarded as medicines. This even applies, in certain instances, to preparations of undoubted therapeutic value for which there are no non-proprietary equivalents: when appealed to regarding these, the Ministry of Health seems disposed to overlook the rights and needs of insured persons. It was reported recently that the Drug Advisory Committee set up by the Ministry of Health had, after long months of apparent inaction, submitted a report upon questions arising in connection with the prescribing of proprietaries. Judging from the wording of the announcement that this report had been sent to the Ministry, it seems that the prescribing of proprietaries is not to be severely discouraged. It was never intended that the contributions of insured persons, employers and taxpayers should be frittered away in payments for so-called patent medicines and other proprietaries. When the first National Insurance Bill was before Parliament it was well known that non-proprietary medicines were obtainable for practically all purposes, and financial provision was made accordingly. But to such an extent have proprietary medicines established themselves in the scheme of medical benefit that we find one Government department—the Board of Customs and Excise—authorising the dispensing of unstamped packages of dutiable medicines in order, apparently, to lighten the burden on the public purse by allowing the money at the disposal of another Government department—the Ministry of Health—to go further. Chemists on the panel now have to keep in stock two different packs of dutiable medicines, and they may yet have occasion to regard the permission to dispense the unstamped packages as a very mixed blessing. Meanwhile, evidence is thus furnished of encouragement by the Government of the supply of expensive proprietaries in place of less costly medicines. Protests by individual chemists against money being needlessly expended in this way while their dispensing fees are being discounted appear to be of no avail, and the prospect of any representative body agitating for rectification of the abuse seems exceedingly remote. With unlimited funds available, the prescribing of proprietary medicines for insured persons might be excusable, though hardly necessary. As it is, Insurance practitioners who prescribe patent medicines and proprietary brands of galenicals need to be educated in a knowledge of the value of non-secret remedies, while chemists require protection against the rising flood of proprietaries which threatens to overwhelm the funds of the National Health Insurance scheme.

The Decline in Shellac

DURING the last two months, or since the position was referred to in our issue of October 12 (p. 450), the tendency of shellac prices has been largely downwards, with an occasional reaction following any notable decline, and the London spot price for usual standard T.N. orange in cases fell this week to 155s. per cwt., which closely approximates to the lowest point recorded in 1927. At the opening of this month the appearance of the market was quite firm, with some recovery in consequence of the excellent demand and the much stronger statistical position disclosed at the end of November, when the London warehouse stocks were reduced by another 2,962 cases to 18,755 cases; this indicates a shrinkage of about 11,400 cases from the highest figures that were reached this year on May 31 last. Undoubtedly the market sentiment has been adversely influenced for some time past by fears of a falling off in American trade requirements consequent

upon the recent financial crisis, the after-effects of which, however, may prove to have been exaggerated. Having regard to the prospective American demand for shellac, it was suggested in the American trade that, on the contrary, owing to the extensive schemes of construction which have been planned for the coming year, the use of this product is likely to experience a further expansion. The fact has to be noted that much heavier quantities have gone into American consumption in the course of this year, while the quantities shipped from Calcutta direct during last month were practically double the amount for the same month last year, as will be seen from the returns given below. The main reasons for the renewed weakness in our market lately have been the liquidation of stale bull commitments over the year-end, in the face of considerably heavier Calcutta shipments for November, and the much larger quantities which have been landed. This situation, combined with somewhat restricted deliveries for the current month, would point to some increase in the stocks on balance. New support has thus been checked on the approach of the Christmas holidays, although it may be emphasised that the Calcutta market has shown some resistance to the downward movement, with quotations only slightly under those ruling in the earlier part of this month. Some little time ago it was reported that a syndicate had been formed in Calcutta with the object of supporting the market, and this possibly accounts for the absence of any selling pressure there. We give below the monthly averages of landings and deliveries since 1925, together with warehouse stocks:—

London	Monthly averages		Stocks at end of period
	Landings	Deliveries	
	Cases	Cases	Cases
1925	4,918	4,851	10,847
1926	5,515	5,078	15,894
1927	6,811	6,833	15,371
1928	7,463	7,122	19,469
1929 (Jan.-Nov.)	6,188	6,259	18,755

The average of the deliveries so far this year has been slightly more than the landings, in contrast to the previous year, although outgoings for the eleven months totalled 68,848 cases against 79,130 cases for the corresponding period of last year. The following returns of Calcutta shipments are very striking as indicating the much increased absorbing capacity of American trade:—

Shipments	Total to all ports	To the United States	To other countries
From Calcutta—	cwt.	cwt.	cwt.
1928, Jan.-Nov.	442,027	169,517	272,510
1929, Jan.-Nov.	504,168	248,404	255,764
	Incr. 62,141	Incr. 78,887	Decr. 16,746

It will be seen that not far short of 50 per cent. of the total shipped from Calcutta to all countries (504,168 cwt.) this year to the end of November went direct to the United States. The increase of the total shipments to all ports for that period, compared with the corresponding figures for last year of 62,141 cwt., has not been sufficient to cope with the increase in the American imports, so that there has been a notable decrease in the supplies dispatched to other countries, including the United Kingdom. The course of the market in shellac would seem to have been shaping much on the same lines as that for rubber, having regard to the part played by American consumption, but it seems curious that shellac has not shown more resistance than rubber to adverse outside influences, considering that the shellac industry in British India virtually constitutes a monopoly. Regarding market prospects, sentiment at Calcutta does not favour lower prices, while there seems to be plenty of room for an upward movement. Below are the extreme

highest and lowest figures touched in the past three years or so:—

Orange T.N. spot per cwt. (cases)	Highest	Lowest	Closing price
1927	270 0	152 6	250 0
1928	257 6	172 6	200 0
1929 (to date)	210 0	155 0	155 0 (Dec. 18)

It is well to bear in mind that current supplies on the whole are well absorbed and that the present level of prices is only slightly above the lowest figure of 152s. 6d. that was touched in 1927, or for quite a number of years.

The Sale of Arsenical Weed-Killers to Persons Under Age

A REFORM of the poison laws is advocated in two articles in the "Justice of the Peace" (November 23 and November 30), setting forth the need for complete revision and consolidation. A correspondent, writing to our contemporary "The Lancet," recently challenged Mr. Marshall Freeman's assertion that whereas a qualified chemist could not sell white arsenic to a youth who wanted it to kill rats, a licensed dealer in agricultural and horticultural poisons could sell a gallon of arsenical weed-killer to the youth for use on his father's garden. Our contemporary, in commenting on the matter, declined to express an opinion. It is provided, in the Regulations relating to the sale of agricultural and horticultural poisons, that the provisions of the Arsenic Act, 1851, shall continue in force and be binding on any person who sells arsenic. Therefore it has been assumed that the Regulations—although they do not prohibit the sale of anything to persons under age—automatically prohibit such sale of arsenic because they embody the requirements of the Act of 1851, which says, *inter alia*, that "No person shall sell arsenic to any person other than a person of full age." But the Arsenic Act, 1851, only applies to "arsenic, arsenious acid and arsenites, arsenic acid and the arseniates and all other colourless poisonous preparations of arsenic," and that word "colourless" has a practical significance that seems to be wholly unappreciated. The Arsenic Act, 1851, is directed against the sale of arsenic and arsenical preparations that are white and colourless. Its provisions as to mixing soot or indigo with the arsenic before sale so as to prevent it from being mistaken for anything else and the reference to colourless preparations as being the only preparations to which the Act applies inevitably restrict the sale of those preparations to persons of full age, but place no restrictions upon the sale of a coloured arsenical weed-killer to minors. Mr. Marshall Freeman, in the articles to which we have referred, cites the judgment of the late Mr. Justice Grove in the case of *Templeman v. Trafford* (1881), in which, referring to Section 15 of the Pharmacy Act, 1868, the learned judge said the intention of that requirement was

"To protect the public by insuring that the person who controls the business of the sale of poisons should be a duly qualified and registered chemist."

That was the fundamental principle underlying the intervention of Parliament. Evil results have followed the departure made from that sound principle in 1908; and the sooner Parliament returns to the *status quo* before that unfortunate diversion the better for the safety of the public.

The Cost of Medical Treatment

A PROMINENT business man in the United States, Mr. Edward A. Filene, has been addressing the American Hospital Association Convention on the cost of medical treatment so far as the middle classes are concerned; and the text of his remarks is printed in a recent issue of the "Journal of the American Medical Association." The problem, it appears, is not less onerous in the States than on this side of the Atlantic; Mr. Filene

refers to people whose lives have been "warped by the financial burdens of illness," and doubts whether in some instances a cure does not cause more suffering (though of a different kind) than the disease itself. He makes two suggestions. The first is that the medical profession should inaugurate a system "based primarily on the economies of large-scale operations and fairly predictable sales"—in other words, that every patient should call on his doctor twice a year at a fixed fee, so that, knowing what the probable income for twelve months' work would be, the doctor could frame his budget accordingly, earn a larger income, and have more time left for the care of patients who were really ill. The second suggestion, virtually an expansion of the first, envisages the formation of what Mr. Filene calls "medical guilds," groups each comprising "fifteen or twenty physicians," who would "pool their resources in the creation of an efficient business organisation . . . for dispensing medical service." We notice that something of this kind is being inaugurated in the specialist quarter of London; its success, obviously, cannot be predicted in advance.

The speaker continued:—

Among the members of a guild one or two would be skilled general diagnosticians, the others would be specialists in the various branches of medical science—a nose and throat specialist, a gynaecologist, a pediatrician, one or two dentists, a neurologist or two, and so on. All of them would have their offices in the same building. . . . They would employ an expert in scientific business management to carry on their business operations, such as upkeep and management of the plant, and accounting. . . . The guild's patients would not be put to the exasperating nuisance of going from one end of the city to another, from one physician, with his own set of questions and records, to another, in search of specialised advice on one or more angles of their particular disabilities.

Assuming that men so unworldly—shall we say?—as those of the medical profession could be induced to embark on propaganda for bringing the middle-class public regularly to their consulting rooms, there remains the larger question of what may be called syndicated consultancy, which is more complex. Human nature being what it is, the difficulty of getting any "fifteen or twenty physicians" to combine for the purpose of supplying specialised service without the backing of a recognised institution might well prove insuperable. All these physicians would be stars, but we may be permitted to doubt whether they would be content to differ in glory. On the whole, the extension of the hospital system to paying patients promises better results.

The Alembic Club

THE New York "Journal of Chemical Education," Vol. VI, Nos. 7 and 8, contains a brief account by Dr. Leonard Dobbin, well known to readers of THE CHEMIST AND DRUGGIST, of the Alembic Club, founded on October 29, 1889. The constitution of the Club provided that it should consist of not more than thirteen corresponding members. Ordinary members were to be residents of Edinburgh or the district, and were to become corresponding members if they ceased to reside in the neighbourhood. Ordinary meetings were held monthly at the residences of the members in rotation, and an unwritten rule required each member on appointment to a university chair to entertain his fellow members. The original members of the Club were (in order of seniority) John Gibson, Leonard Dobbin, Hugh Marshall, James Hawker, Alexander Smith and Ralph Stockman. The objects were to secure the better recognition of the University of Edinburgh in chemical science; to encourage the study of the history and literature of chemistry; and to further the professional interests of members. For the wider circle of those who are interested in various phases of science, the importance of the Club consists chiefly in the series of reprints that they owe to its enthusiasm. The first of these was Joseph Black's "Experiments upon Magnesia Alba, Quick-Lime and other Alkaline Substances," issued in 1893; and one of the most important was the works of John Mayow, translated from the original Latin.

SKETCHES IN THE HISTORY OF ENGLISH MEDICINE

III. Daybreak: The Later Middle Ages and the Rise of the New Learning

By CHARLES SINGER, M.D., D.Litt., F.S.A.

(*Lecturer in the History of Medicine in the University of London*)

IN the second Sketch in this series of short studies (THE CHEMIST AND DRUGGIST Special Issue of June 29) we discussed medical and pharmaceutical practice in England in the thirteenth and fourteenth centuries. We took as our text certain verses from the "Canterbury Tales" of the poet Chaucer (1340-1400), whose life closed with the last year of the fourteenth century. We showed how the true native stream of medicine had nearly dried up and had been replaced by the more vigorous flow from Salerno and from the Arabian physicians. During this period the movement for the founding of universities had made much progress on the Continent. Medicine had entered the curriculum. Salerno had ceased to be important, but great medical schools had grown up, especially at Montpellier in France and at Bologna in Italy. Padua, too, which was ultimately to eclipse them all, was coming to the fore.

Perhaps the most noteworthy medical man of the fourteenth century was Guy de Chauliac (1300-68). He studied at Bologna and then settled at Montpellier, where he taught for many years and had Englishmen among his pupils. His great Book on surgery, written in 1363, circulated widely in England in the fifteenth century and set the standard of surgical practice here.

There is still at Bristol a copy of Guy de Chauliac's surgery written about 1430 for John Duke of Bedford. He was regent of France at the time and doubtless sent the manuscript home. It contains a number of interesting illustrations. Among them is an anatomical demonstration, an operation on the thigh, and a picture of a surgeon putting splints on a fractured leg (see page 743). The splint used is of the familiar "Gooch" type. The manuscript is also remarkable for its figures of instruments. Those for trephining the fractured skull are reproduced in page 742 and are thus described:

"There are six instruments necessary for the operation. Each should be of three sizes—large, small and medium.

"Firstly, *terebræ*, to make holes so that the bone may be elevated. These are of divers forms. Galen used them in the form of augers with a little ridge surrounding the sharp extremity to prevent injury to the brain (fig. o). The surgeons of Paris, to avoid a number of instruments, adapted to the thickness of the bone, use *terebræ* perforated above the sharp point and provided with a peg so that by changing its socket they adapt the instrument to the thickness of the bone (fig. b). The surgeons of Bologna use an instrument in the form of a lance, so shaped that when the point enters, the width of the remainder gives the surgeon the necessary control, so that it does not slip (fig. c).

"Secondly, *separatoria* to open up the bone between the holes. There are two forms, the straight or French form (fig. d), and the curved or Bolognese form (fig. e). The handle of the latter can be used as an elevator.

"Thirdly, *elevators* used for raising and separating the detached bone (fig. f).

"Fourthly, *rugines* to widen the fissures (fig. g).

"Fifthly, *lenticularia* for safely smoothing and finishing the roughness by means of the edge at their termination. The form is that of a 'penknife' with the lenticula at the end thus (fig. h).

"Sixthly, the *hammer* for striking the chisel. It should be of lead, which weighs heavy and sounds dull (fig. i)."

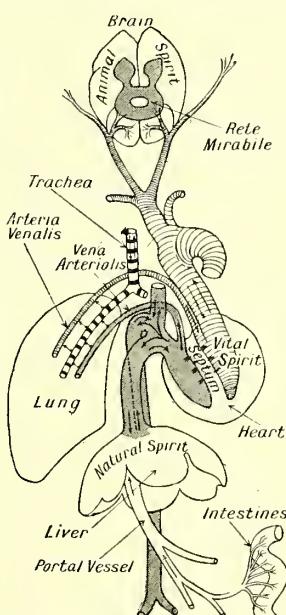
The operation was performed by making a number of holes with the *terebra*. These holes were then joined by the use of the chisel edge of the *lenticularia* and hammer. The piece of bone, when detached, was finally removed.

The nature of the *terebra* or borer can hardly be made out from the figures of our manuscript, which are, however, explained by another and later figure (see page 742). The Bristol manuscript represents a type of *terebra* that was screwed into the bone like a gimlet. The little circles at the end are an attempt to represent the spiral worm of the screw. In the type used by the Parisian surgeons there was a series of small holes represented by dots, through one of which a transverse peg was thrust to prevent the instrument penetrating too deeply.

Other surgical instruments in use in England are to be found in fifteenth-century manuscripts of John Arderne.

Parts of Guy de Chauliac's Surgery were translated into English. There is a manuscript of the anatomical section of this translation written about 1450. The work is really a practical treatise on dissection. It has never been printed. Our readers may, therefore, like to have a section of it. Of the heart, it says:

"The heart is the beginning of the life, and, therefore, he standeth as a king or lord in the mid-ward of the breast. The form or shape of the heart is like to a pine apple (i.e., what we now call a 'pine cone') inverser. The substance of the heart is hard, as it were lacertous (i.e. muscular), and hath in him two ventricles, the right and the left. And hath on the midward a ditch or pit as Galen saith in which the nourishing blood is defid (i.e., digested) that cometh from the liver and is made subtle and spiritual. The which blood is sent by the arteries to all the body and principally to the principal members and to the brain. In the which brain in defying (i.e., digesting) he taketh another nature and is made animal. And blood goeth to liver also and is there made natural."—(Spelling modernised.)



GALEN'S PHYSIOLOGY

Until the time of Harvey the bas's of physiology were the three spirits—animal, vital, and natural—with which the blood was charged in the brain, heart, and liver, respectively.

This interesting passage is worth explanation, for it is a type of all physiology till the time of Harvey. It was supposed by the ancients, and notably, as our author says, by Galen, that the basic principles of life were certain "spirits" which dwelt in the blood. Blood was formed in the liver and then charged with "natural spirits." It was distributed thence to the veins in which it ebbed and flowed. One main branch of the venous system was the right side of the heart. For the blood that entered this there were two possible fates. The greater part remained awhile in the ventricle parting with its impurities, which were carried off to the lung, and there



ENGLISH PHARMACY IN THE FIFTEENTH CENTURY

These delightful MS. drawings, dating before 1450, have the following inscriptions: "Asclepius helyth men with termes and medicines"; "Asclepius taught to gether rots and herbes, floures and frottes"; "Asclepius scheweth mesures and quantites weghetes and scales"; "Asclepius tacheth to mak pulvers confectees and electuaries"; "Yporcas and Galen scheweth certeyne quantites in refeyning." The word "Fermes" in the first is a Middle English contraction for "fermacies"—i.e., pharmacies.

British Museum, Sloane MS. 6.

exhaled. The blood in the right ventricle then ebbed back again. But a small portion of it trickled through a minute channel or channels—the "ditch or pit" of our author—in the interventricular septum to the left ventricle. There it encountered air brought to the left ventricle by the breath, and became elaborated into a higher type of spirit, the "vital spirits." These spirits were distributed by arteries. Some of these arteries went to the brain. In that organ the blood became charged with a third spirit, the "animal spirits." These spirits were distributed by the nerves, which were supposed to be hollow. The conception has given rise to our modern phrase, "full of animal spirits," which means full of nervous energy.

During the Middle Ages the number of medical men was always small in proportion to the population. One excellent reason for this was the difficulty of communications. A medical man can live only on fees, and if he cannot cover the ground at a fair pace he cannot live at all. Mediæval England was an agricultural country. Roads were bad and there were very few large towns. Thus, there was no scope for medical schools, and till the seventeenth century nearly all physicians were foreign-trained.

The actual practice of medicine thus rested in the hands of the "barbers" and "apothecaries." These were the true practitioners until after Tudor times. Companies of barbers were to be found in several English towns. The best known are those of London, York and Bristol. In London a grant of arms "to the masters of Barber and Surgery within the craft of Barbery" was made in 1451. The Company was incorporated by Edward IV in 1462. In the meantime a group of Surgeons had arisen and allied themselves with the Barbers in 1493. The Barber-Surgeons' ordinances were settled in 1530 by Sir Thomas More, and they were formally united with the Fellowship of Surgeons in 1540.

The Barber-Surgeons' Guild was the first body in this country to teach practical anatomy. Lectures on the

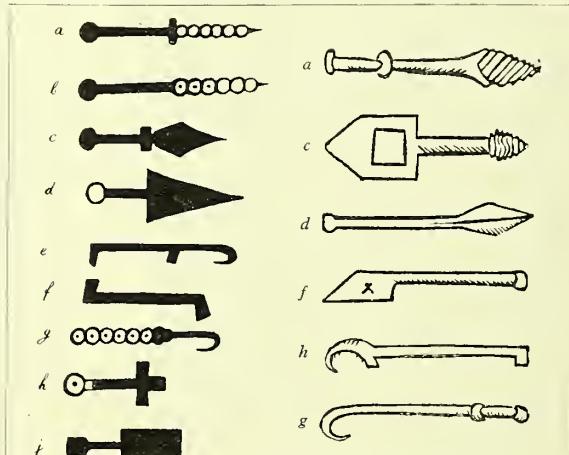
subject were being given in London by John Caius—a pupil of Vesalius and second founder of Gonville and Caius College, Cambridge—as early as 1544. A few years later lectures became systematic with the Barbers' Company. Among the early lecturers on anatomy was John Banister (1540-1610), some of whose figures and models still exist. A painting in the Hunterian Library at Glasgow shows Banister in the act of lecturing on anatomy. Others exhibit various anatomical structures taken mostly but not entirely from Vesalius.

Another early anatomical lecturer to the Barber-Surgeons of London was Giulio Borgarucci (died 1581), formerly a professor of anatomy at Padua, later a convert from the Catholic to the Protestant faith, and court physician to Queen Elizabeth. He was a pupil of Vesalius, who had reformed anatomy by his work at Padua. It should be added that as early as 1545 one Thomas Gemini published in Latin, at London, a very fair version of the "Anatomy of Vesalius," dedicated to Henry VIII. Subsequent editions were dedicated to Edward VI and Elizabeth.

The Barber-Surgeons at York formed naturally a smaller corporation than those in London. Their early guild-book has survived, and it contains some interesting pictures illustrating the medical theory and practice of the later Middle Ages.

The history of the Apothecaries is less easy to disentangle than that of the Barbers. In the fourteenth century the Apothecaries in England became associated with the Guild of the "Pepperers." This was a group that

traded with the East, and especially with the Red Sea. Their connection seems to have arisen through the methods of weighing, since the Pepperers in London were the official custodians of the scales of those traders that dealt in *avoirdupois* (Old French *aveir de peis*, that is, "goods of weight"). Later the Apothecaries became associated with the Company of Spicers, while the Pepperers adopted the name Grosarii ("weighers"). The Grosarii are now known as the Company of Grocers. At times it becomes very difficult to distinguish between Pepperers, Spicers and Grocers and Apothecaries. Many among



EARLY SURGICAL INSTRUMENTS

On the left are instruments for trephining from the Bristol MS. of Guy de Chauliac, written about 1430. They are referred to in the text under the letters (a) to (j). On the right are figures from Jerome of Brunswick's "Noble Experience" (1529) which helps to explain the Chauliac instruments.



FIFTEENTH-CENTURY SURGERY IN THE GREAT GUY DE CHAULIAC MS.

The greatest medical man of the 14th century was Guy de Chauliac, who had Englishmen among his pupils. His great book on Surgery (1363) was the standard work in 15th century England. These drawings, taken from the Bristol copy written about 1430, show the surgeon demonstrating anatomy, performing an operation on the thigh, and putting splints of the "Gooch" type on a fractured leg.

they were foreigners, notably Italians and Germans. These various trades quarrelled much among themselves. They often charged each other with adulterating their wares.

In the fifteenth century letters patent were granted to the Wardens of the Grocers' Company giving them the right of "garbling"—that is, separating and examining spices and drugs to prevent adulteration. Certain drugs had to be "officially garbled" before exposure for sale. The word "garble" is interesting as illustrating the history of the drug trade. It is from a late Latin word meaning "to sift." It passed very early into Arabic and also into Italian and Spanish, perhaps through the Arabic. To garble means, in effect, to sort out, and drugs are still "garbled" in the stockrooms and at the docks. The cynical perceived that there was more than one kind of sorting out, and so we have our usual modern sense of "garbling."

In 1511, under Henry VIII, the first Act of Parliament regulating the practice of medicine came into force. The character of this Act presupposes the existence of apothecaries. This class was much encouraged by the

King himself. As has been previously noted in this journal, the King was something of an amateur apothecary. He seems to have specialised on plasters and ointments, but his recipes are none the better for being royal. Here is a prescription ascribed to Henry VIII in a contemporary manuscript:—

A blacke plastré devised by the Kinges hieghnes; Take gummi armoniaci 3ijij, olei omphacini [olive oil] 3ii, fyne thebinthine 3v, gummi Elemi [i.e., of a special cedar] 1, Resun pini 3x. Boyle them together strongly on a softe fyre of coolys in a faire basyn, alwayes stirring it until it be plaster-wyse; and so make it uppe in rolles, and kepe it to your vse.

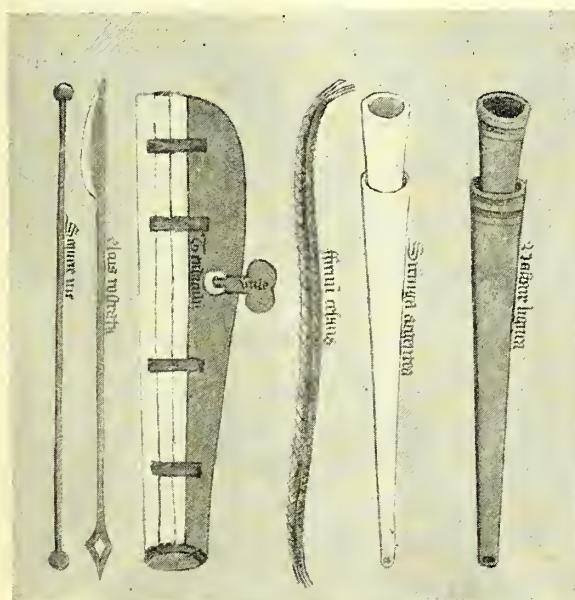
JOHN OF ARDERNE
Portrait taken from his "Praxis Medica" in the Sloane Collection.

In the same manuscript there is an account of "A plastré devised by the Kinges Maestic at Grenewich, and made at Westminstre, to take awaye inflammacions, and cease paine, and heale excoriacions."

The Act of 1511 stopped the practice of physic and surgery by unlicensed folk, and required the examination and licensing of practitioners. By enactment two years later (1513) the members of the Surgeons' and Barber-Surgeons' Companies were exempted from serving as constables, watchmen, and jurymen. In 1540 the formal separation of Barbers and Surgeons of London was determined by Parliament.

It was not until 1543 that there was passed "An Act that persons not being Surgeons may minister outward medicine." These persons were the forerunners of the licensed apothecaries, whose Society or Company was not incorporated until the seventeenth century. In this Act the Surgeons are censured for their mercenary conduct while the unlicensed apothecaries are praised for their charitable treatment of the poor. We further learn from the same Act that the regulation had been introduced among other things "for the avoidance of sorceries, witchcraft, and other inconveniences."

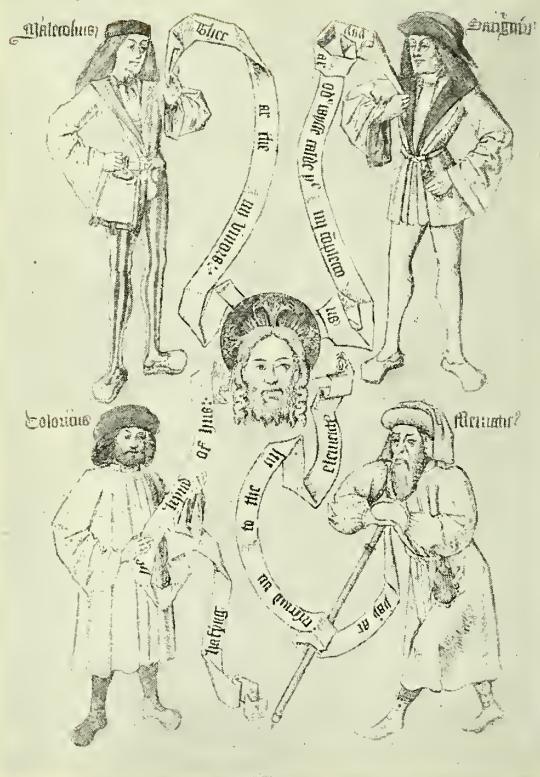
By the date of this Act the advent of printing had greatly changed the general level of knowledge. We may therefore glance at a few of the early medical products of the English press.



JOHN OF ARDERNE'S INSTRUMENTS

John of Arderne was a 14th century surgeon whose work survives in the 15th century Latin MS. from which these figures are taken. He specialised in operations for fistula.





BARBER-SURGEON'S GUILD BOOK

These figures are taken from the Guild Book of the Barber-Surgeons of York, now in the British Museum, dated 1484. The drawings show the four temperaments.

The first medical book printed in English is a queer little pamphlet in large Gothic letters entitled: "A litil boke the which traytied and reherced many gode things necessaries for the Pestilence, made by the Bishop of Arusiens." The printer was William of Mechlin, who issued it from Holborn, probably in the year 1485. It is founded on a tract by one Johannes Jacobus of Montpellier, who lived in the fourteenth century. A hundred years after his time it was enlarged without acknowledgment by the Norwegian Bengt Knutsson, who led an eventful life and ultimately became bishop of Arusius in Denmark. He practised medicine for long in France before returning to Scandinavia.

The first medical illustration in an English book is a dissection scene in a translation of Bartholomaeus Anglicus printed by Wynkyn de Worde in 1495. Far inferior were the figures in the translation of Jerome of Brunschwig's Surgery, issued in London in 1529. An important publication of the sixteenth century was the English version of the great Surgery of John of Vigo, the first edition of which appeared in London in 1543. It is particularly interesting for its extensive glossary of technical terms, which give us an insight into the pharmaceutical and medical language of the day.

The first half of the sixteenth century was an era of translations. In the second half of the century writers began to use English as the medium for their own medical compositions. Thus William Bullein (died 1576) gave us his posthumously famous *Bulleins bulwarke of defence againste all sicknes, sornes and woundes* (1579), and in his lifetime sent forth *A comfortable regimenter against pleurisi* (1562) and *A dialogue bothe pleasaunt and pietifull against the fever pestilence* (1564). Thomas Gale (1507-87), a surgeon in the army of Henry VIII, produced *Certaine workes of chirurgerie* (1563). William Clowes (1540-1604) published *A profitable and necessarie booke of observations* (1596) and *A right frutefull treatise for the*

artificial cure of struma (1602). Clowes was a master of vituperation. He did not like unauthorised practitioners, as is evident from the following passage:—

" . . . Yea, nowadays it is apparent to see how Tinkers, Tooth-drawers, Pedlars, Ostlers, Carters, Porters, Horse-gelders and Horse-leeches, Idiots, Apple-squires, Broom men, Bawds, Witches, Conjurers, Sooth-sayers and Sow-gelders, Rogues, Ratcatchers, Runagates and Proctors of Spite houses with such like rotten and stinking weeds, which do in town and country, without order, honesty and skill daily abuse both Physic and Chirurgery, having no more perseverance, reason or knowledge in this art than hath a goose; but a certain blind practice without wisdom or judgment and most commonly useth one remedy for all diseases and one way of curing to all persons, both old and young, men, women and children, which is as impossible to be performed or to be true as for a shoemaker with one last to make a shoe fit for every man's foot, and this is one principle cause that so many perish."

It is appropriate here to say a few words concerning the relation of the medical man to the army. In the early part of our period this was quite unofficial. Apothecaries and surgeons were engaged for the campaign by the head of the regiment or some like official, just as he might engage personal servants. During the reign of Queen Elizabeth matters became more formalised, and the general, in the name of his sovereign, engaged the surgeons and apothecaries. For the conduct of Elizabeth's forces, printed regulations were issued. These, however, seldom contain reference to the medical department. The best official account known to me of the duties of the Elizabethan military surgeon is that given by Leonard Digges (died 1571) in the second edition of his *"Arithmetical militare treatise, named Stratioticos,"* issued in London by his son Thomas (died 1595) in the year 1590. It runs as follows:—

"The dueute of a Surgeon of a Bande.

"This officer ought to be a man very skilfull in his Art, for that otherwise many times (by the unskilfulness of Surgeons) small woundes are made sometimes Maymes, and sometimes Mortall. It is therefore fit that no Surgeon in any Bande be admitted till the Surgeon major of the Regiment have examined well his skill.

"He ought also to be provided of a good Chest of Salves, Oyles and waters for killing the heat of shot, and all such Instruments as are necessary for his Art: without the which and his testimoniall from the Surgeon major or Surgeon generall of his sufficiencie, he ought not to passe muster, or receive pay.

"He ought to be carefull, honest, and loving to the souldiers he hath in cure: and besides his ordinary pay of the Prince, he is to have monethly somewhat out of every souldiers pay, toward the charge of his chest or medicines, besides the reward of such as are of abilitie, to the end the poore souldiers be cured gratis.

"This officers Art alone would require a long volume to be particularly expressed: and therefore but briefly in general terms touched, and referred for his sufficiencie and skill to the chief Surgeon of the Armie or Surgeon major of the Regiment wherein he serveth: who



FIRST ENGLISH-PRINTED MEDICAL ILLUSTRATION

This dissection scene is from Wynkyn de Worde's edition of Bartholomaeus Anglicus, printed in 1495. Other woodcuts from this work have been reproduced previously in these pages.

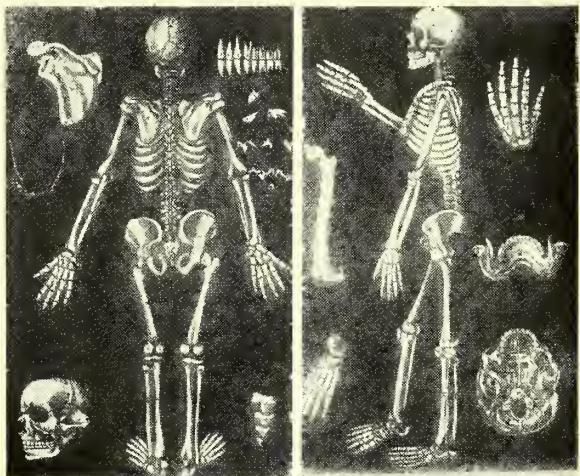
British Museum.

ought alwayes to be a very choise person and most expert, learned and experienced in his Science: And for want of due care herein onely, a number of valiant men perish of very small hurts."

The best known of the Elizabethan army surgeons was William Clowes (1540-1604), to whom we have already referred. He learned his craft as an apprentice to a London surgeon. In 1563 he became surgeon to the army in France commanded by Ambrose, Earl of Warwick. On this expedition he became lifelong friends with his colleague, John Banister, whom we have discussed above. Clowes also served several years in the navy. In 1569 he settled in London and was admitted to the Barber-Surgeons' Company. In 1575 he became surgeon to St. Bartholomew's Hospital. In 1585 he was in the field again, having been sent for "by her Majestie's commandment to goe into the Low Countries, to attend upon the Right Honourable the Earle of Leicester, Captain General of her Majestie's forces." Of his military experience and of the surgery which he says, "Slew more than the enemy," Clowes gives an account in his "*Prooved practice for all young Chirurgians concerning Burnings with Gunpowder, Woundes made with Gunshot, Sword, Halbard, Pike, Launce or such other*" of 1588. As regards the "burnings with gunpowder," it must be remembered that these were common when firing was often point blank. The work contains illustrations that portray the army conditions of the day in a lively fashion.

Great changes were also introduced into the medical services of the Navy. But these, together with the first beginnings of tropical medicine, must be deferred to the next section in this series.

We may terminate our account with a few words on the drug trade. This, during the two centuries that we have been considering, became more and more concentrated in one quarter. In late Elizabethan times the street in the city now known as Bucklersbury was entirely devoted to it. There resorted to Bucklersbury not only the great



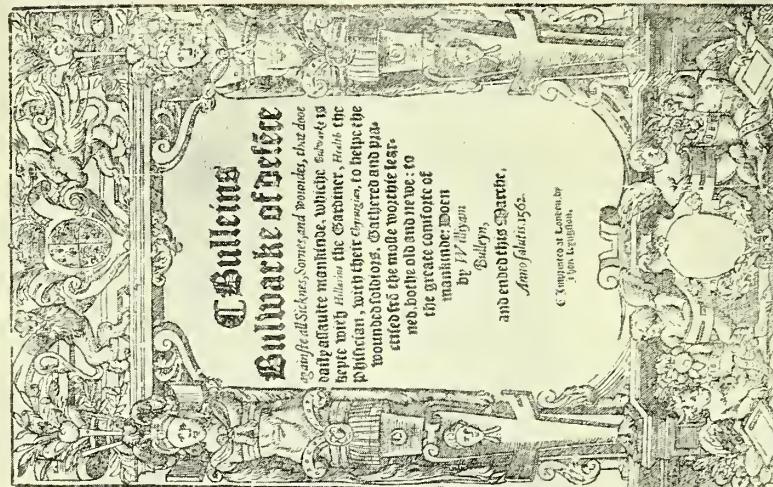
Drawings of the skeleton used by Banister for demonstration purposes.
Hunterian Library.



JOHN BANISTER LECTURES TO THE BARBER-SURGEONS' COMPANY OF LONDON

Admitted a Member of the Company in 1572, John Banister was appointed their anatomical lecturer. This contemporary painting shows him delivering the visceral lecture in the London Hall in 1581. The Barber-Surgeons were the first to teach practical anatomy in England.

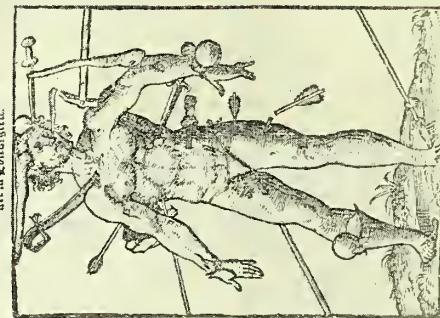
Courtesy of Hunterian Library, Glasgow University.



Here beginneth a list whiche
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hath and warded many yore whiche
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CERTAINE VVORKES
of Chirurgie, newly compyled and
printed by Thomas Gale, late
Bren Chirurgie.



Printed at London by R. and H. 1563.



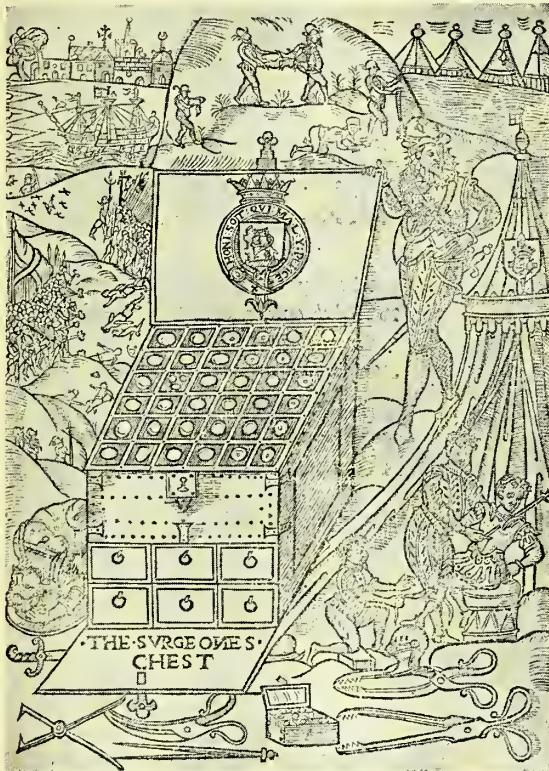
TITLE PAGES OF THE MOST IMPORTANT MEDICAL WORKS PRINTED IN ENGLISH IN THE FIFTEENTH AND SIXTEENTH CENTURIES

On the left is the 3rd Edition of Geminus' 'printed version of the Anatomy of Vesalius, dated 1559. The portrait of Queen Elizabeth in the centre is said to be the first engraved of her. English, issued from Hallorn in the name of the Bishop of Auisens, 'Certaine works of chirurgery', 1563, written by a surgeon of Henry VII's army. Right above, the famous 'Bullen's bulwarkes of defence against all sickness', probably in 1495, published in 1559, three years after his death. It was an original composition. Bottom right, head of title page of Jerome of Brunschwieg's 'Most excellent hornish apothecary, printed in London, though dated from Cölln (Cologne), 1561. British Museum.

Amost exēllent and perfect
youthly apothecary or hornish physit book
for all the ſcōd and diſaſes
of the body.

**Translated out of the Latinne ſcōd into
Englyſh by John Golþy.**

The Bulwarkes of Physic
by Thomas Gale, 1563.



WORKS OF AN ARMY SURGEON OF QUEEN ELIZABETH'S REIGN

William Clowes was a colleague of John Banister in the French campaign of 1563. He was also a naval surgeon, a Member of the London Barber-Surgeons' Company, and Surgeon to St. Bartholomew's Hospital. His two great books were his "Surgeone's Chest" (title page on left) and "Prooved practice concerning Burnings with Gunpowder" (engraving showing an operation on the field, right), both published in 1588.

merchants who had consignments of drugs, herbs and spices from the East, but also market women and girls who had gathered native herbs in the fields and gardens round London. In "The Merry Wives of Windsor" Falstaff tells us that he is not like one of the "lisping hawthorn-buds that come like women in men's apparel and smell like Bucklersbury in simple time."

The drug trade was profoundly affected by the discovery of America. Many medicines came from there. A treatise "Of the wood called Guiacum," one of the most valued of American remedies, appeared in 1536, translated by one Thomas Paynell, Canon of Merton, from Ulrich von Hutten, the German champion of Church reform. Another work that drew much attention to American drugs was an English translation of the work of the French traveller, André Thevet, under the title "The New found worlde or Antartickē," printed in London in 1568. It contains a description of tobacco. The most influential of all was undoubtedly the translation by the merchant, John Frampton, of a work by the Sevillian Doctor Nicholas Monardes. Frampton gives his book the cheerful title "Joyfull Newes out of the New Founde Worlde." It appeared in several editions from 1577 onward, and contains figures of American plants, among them being sassafras and tobacco, together with a description of the uses of the "Oil of the fig tree of Hell"!

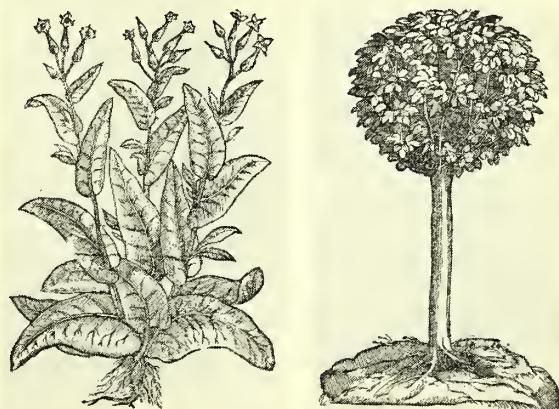
Tobacco, it appears from Thevet's and Frampton's works, was first introduced into France, Spain and England not for the purpose for which we now use it but as a potent drug which was believed to be of especial value in the cure of the newly-recognised disease syphilis. Thevet calls it "the wylde men's evyll," referring to the belief that it was imported from the newly-discovered America. Of it he says:—

"Now this evill taketh the parties, as well wilde men as Christians that are there, by contagion (or) touching, even as the pockes dothe. Also it hath the like Symptomes, and it is daungerous, that if it be



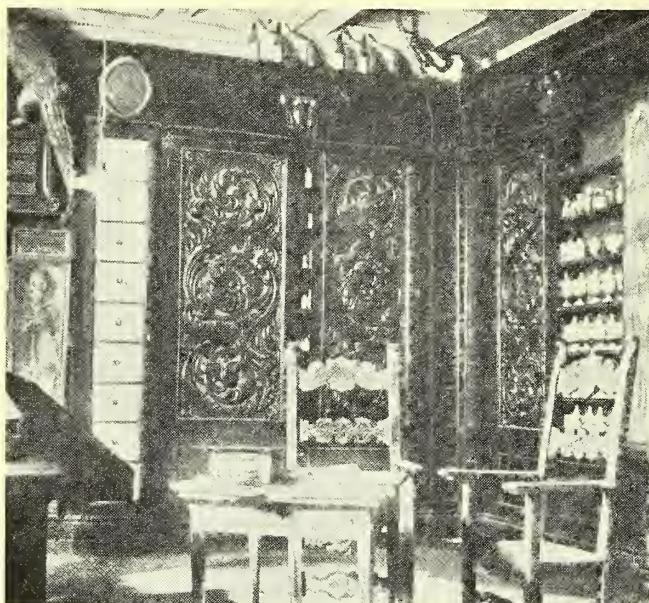
waxen old, it is harde (and daungerous) to heale: for sometimes it dothe afflict them even to the death. As for the Christians, which doe inhabite in the lande of America, if they couple themselves with the women, they shall never (escape infection), but shall fall into the daunger thereof mucche sooner than they of the countrey. For the curing of this disease, likewise for a certain alteration that oftentimes cometh wyth this evill, they make a certaine decoction of the barke of a tree, named in their language Hiuourake, of the which they drinke, more easier to cure than with our medicin, and they are more easier to be healed than others to my judgment, for their temperatenesse and completion, which are not broken out with infection, as (ours) are."

Thevet's Hiuourake is but our modern guaiacum, the use of which as a drug has now nearly gone out.

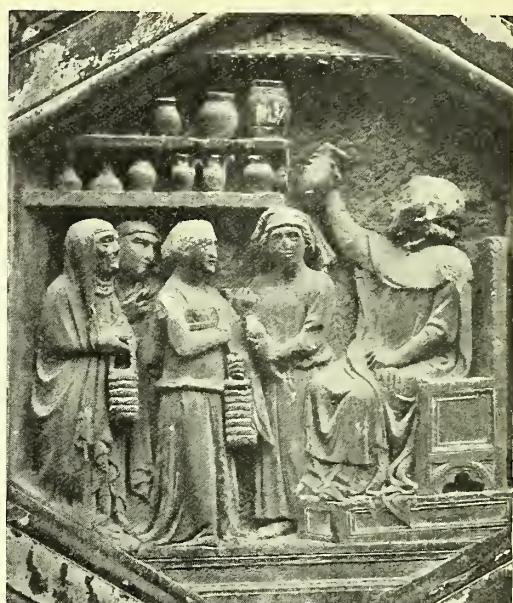


FROM THE NEW-FOUND WORLD

Frampton's "Joyfull Newes out of the Newe Founde Worlde" of 1577 included among its engravings of new plants from America these early representations of "Tabaco" and "Sassafras."



Interior of the ancient pharmacy of the Hermits of Camaldoli.



Bas relief by Andrea Pisano in the Duomo at Florence. The doctor in the pharmacy examines the urine in glass vases.



Pharmacy vases of Sicilian make of the seventeenth century, from the Bologna Museum.



Theriaca vase. Civic Museum, Bologna.



Three pharmacy vases on the left of the Quattrocento; one on the right of faience decorated with Arabic motives. All from the Castiglioni Collection.

**PHARMACY POTS ILLUSTRATING THE DEVELOPMENT OF ITALIAN PHARMACY
IN THE FOURTEENTH AND FIFTEENTH CENTURIES**

Photographs by courtesy of Professor Dr. A. Castiglioni

THE ITALIAN DRUGGIST

and the Druggist's Shop at the Dawn of the Renaissance

By PROFESSOR DR. ARTURO CASTIGLIONI

(*Professor of the History of Medicine in the University of Padua*)

THE pharmaceutical art is certainly of ancient origin, proof of which is to be found in the Homeric legends, in the history of Greece and Rome, and by the excavation of the buried city of Pompeii. The sellers of medicaments played an important part in ancient Egypt; and in Italy, at the beginning of the Middle Ages, some organisation and control over the vending of drugs had been established. But for an effectual and proper systematisation by legal statute, with clauses which defined the duties and the responsibility which devolved on the druggists, we must wait until the beginning of the thirteenth century. It is from these statutes that we may gleam some information of the important rôle which the druggists played in the development of science, when the rapid development of Italian mercantile cities, especially Florence and Venice, rendered necessary the formation of corporations. Up to that time the pharmacies or druggists' shops ("spezierie") they were called in Italy in those days), existed almost exclusively in monasteries and at the courts of some of the princes (*C. & D.*, 1929, I, 805), but towards the middle of the thirteenth century they began to take on the character of public institutions. The most recent studies of the statutes of Florence and other Italian cities, more particularly the researches done by Ciasca on the healing art and the trade in drugs in Florence, show what part the druggists may have had in the Florentine corporation, whose importance might be attributed to the influence of their craft in the political life of the city, and how at length, and for what reasons, in the course of time the pharmacy came into existence and remained for many centuries a centre of intellectual life in Italy.

The druggist of the fourteenth century was often a mixture of astrologer and alchemist, and the people readily accredited him with the quality of magician. But the druggist, united in the corporation with the physicians, painters, mercers and other less important crafts, was, at the same time, a manufacturer and a merchant who engaged not only in local trade but also in international trade between the East and West. The Florentine druggists were a strong body, with considerable capital, and traded with all the chief ports and cities of the Levant and the Mediterranean. They had trading relations with England, and, as Ciasca states, an anonymous English chronicle of the latter part of the thirteenth century includes the "Italici" among the merchants, and records as merchandise wax and alum (the latter, according to an ancient English custom, having to be weighed on the King's scales before being sold), and also pepper, ginger, Brazil wood, Kermes mineral. The spice trade was one of the pillars of Anglo-Italian commerce, and a poem of 1436 gives pride of place to the Venetian vessels, followed by the Florentine as bringers of spicess of every description and drugs like rhubarb and senna. The drug trade of Florence was enormous, and Italian galenicals were sought after in every part of Europe. Drugs and spices arriving in Florence and Venice from Syria, Egypt, Sicily, were prepared in Italy and re-sold in the principal markets abroad.

INCREASE OF THE DRUGGISTS

Very soon the druggists were a numerous body. Already in 1297 the practitioners of the healing art with the druggists outnumbered those of other crafts, and the druggists numbered twice as many as the physicians, this being explained by the fact that many druggists did not sell medicaments to the public but engaged solely in the wholesale and export trade. Any agreement

between physician and druggist for financial gain was forbidden by statutes, but at Florence the law permitted a partnership between them, allowed the latter to provide in their shops accommodation for physicians for treating the sick, and permitted the physicians to keep open drug stores on their own account, in which they could receive and treat patients, and employ also druggists for compounding their medicines. In every Italian city the control exercised by the corporation over druggists' shops was rigorous. The premises, drug pots, drugs, galenicals, perfumes were minutely scrutinised, and anything irregular was reported; and in the case of grave infringement, medicaments which were not of the quality and substance demanded were publicly burnt. Particular importance was attached to the composition of theriaca. This medicine of Italian production had attained great renown throughout the world; it contained a large quantity of aromatic substances and its preparation at Venice was done in public with great solemnity and under the supervision of high dignitaries of State. In general, all medicines were composed of a great number of ingredients: among the more strange substances used were emeralds, pearls and other precious stones, all of which had great importance in compounding.

AN ESTEEMED CRAFT

The druggists' shop, with its high shelving on which were ranged drug pots, bottles and jars full of medicines, scents, candles, and a hundred rare or exotic substances, had a peculiar and strange atmosphere, reminiscent of the supernatural or even of black magic. The druggist's shop had its sign or insignia, and some of these were famous, for example, Pern Del Vaga, the painter, was apprenticed in the "Pigna d'Oro" (The Golden Pine Cone) mentioned by Vasari in his history of the Italian painters. The large wooden counter with an air of solidity was placed opposite the entrance door; the walls were panelled in oak, and divided into various sections, and usually there was a niche in the centre (as may be seen in many Italian pharmacies at the present time) in which stood a statue of Esculapius or Hygieia. In other niches there were allegorical frescoes depicting scenes taken from Ovid's Metamorphoses or similar subjects. Behind the shop was the room in which were the furnaces, jars, cauldrons and other apparatus necessary for pharmaceutical operations. The druggist enthroned himself behind the counter, and physicians and other persons of note stood before him, the pharmacy in Italy becoming a "scientific and literary circle" in its first form. It is interesting to note that about 1300 the druggists' shops stocked and sold writing materials and in general all the articles kept by a present-day stationer. It is narrated by Giovanni Boccaccio, in his life of Dante, that the great poet being one day in a druggist's shop in Siena was engaged in reading a book, and so absorbed was he in his task that he was entirely oblivious to a very noisy procession which passed through the street. Those who sold books and writing materials were called in Italian "stationerii," and these persons were mentioned, according to Croce and Ciasca, in the statute governing Florentine physicians and druggists in 1314, and again in 1388. This name has dropped out of current Italian usage, but is still preserved in English.

This fact serves to show the great importance attached to the druggists and explains the estimation that the craft enjoyed among the citizens. The increase in the number of druggists compared with the physicians, due

to the great development of the drug trade, signalled the rise and increased wealth of the members of this craft. Already in 1328 there were fifty-six physicians compared with 188 druggists, and in 1347 the druggists outnumbered the physicians by three to one. It is clear that in the political life of the city also the power of the druggists increased, because records indicate that these have become more and more represented in the civic offices and are possessed with more authority. Those sections of the community in which the druggists held important positions rapidly became rich, partly on account of the great epidemic of plague which swept through Italy. The wealth of the members of this craft, their position in the intellectual and political life of the State, explains the reason why some of the most illustrious names are to be found enrolled among them, including that of Dante Alighieri, the immortal poet. Physicians and druggists belonged to the best families and were considered as citizens of superior standing.

The art was very important. Often the patients waited in the druggist's shop for the physician, while he examined the urine of the sick person and prescribed his medicine. This procedure was so typical that it is found depicted on the celebrated bas-relief of Andrea Pisano on the campanile of the Duomo at Florence, erroneously interpreted for many years as a representation of the potters' art, on account of the prominence which is given to the jars, pots, etc., but representing without any doubt whatever, as Schlosser and Hollaender had observed, the art of the physician and the druggist. This is apparent on close inspection of this bas-relief, which is one of the oldest figurative Italian representations. It must be kept in mind that it depicts the physician in the druggist's shop intent on the examination of some urine which has been brought by a patient or the patient's friends. Whoever compares this representation with others of the same period, as, for example, that of the "Tacuinum Sanitatis" of Cerruti in the Vienna Museum, will be convinced of the likeness of the objects depicted, and understand how the bas-relief represents the interior of a pharmacy, on whose shelves are placed the drug pots. It is sufficient to observe the typical form of these pots in order to be convinced that containers for medicaments are depicted. The print in the famous surgery of Brunschwig, edited in 1497, reproduces evidently the same scene: the physician is selecting medicines, indicating with a wand the ones to be used. Indeed, the same scene is found in a miniature codex of Avicenna of the University of Bologna, reproduced by Giacosa. In the druggist's the physician examines the urine which is brought to him in jars enclosed in wooden or reed covers, cylindrical in form and provided with handles, and then gives directions orally for compounding the medicine. The writing of prescriptions does not come until at a later age. Pisano's bas-relief must be interpreted as depicting not the practice of medicine, but of the physician's and druggist's art. Whenever a physician is represented this is very evident not only by the characteristic costume, but also by the high chair which was the honour due to a "Master" of the University. Thus did the pharmacy constitute the centre where the activities of the physicians developed, until the time arrived when hospitals had become enlarged and more numerous, when the physicians transferred thence.

A PLACE IN THE HISTORY OF ART

The study of the old druggists' shops is of especial importance from the point of view of the history of art. One of the most flourishing of Italian arts may be said to have been born in the Italian druggists' shops of the fifteenth century and owed to them its greatest development. Such assertion is not at all exaggerated. It is true that ceramic art in Italy had a continuity of tradition of nearly 1,000 years, which, however, was broken and the art almost extinct during the first centuries after 1000 A.D., when Italian potters did not produce anything but crude and simple pots and jars for domestic use, and it is also true that drug pots did but make up an insignificant portion of

the output of the old ceramic works, as it is natural that plates, basins, flower vases were manufactured in larger quantity. But, on the other hand, it cannot be denied that it was from the most troublous times of the Middle Ages until the commencement of the thirteenth century that majolica ware remained crystallised into few or poor forms, while splendid centres for ceramic ware arose in the neighbouring countries occupied by the Arabs, and the first awakening came through the influence of oriental art which penetrated into Italy with the commerce in drugs.

FAMOUS SPECIE JARS

Towards the end of the fourteenth century the Arabic influence in Italy manifested itself contemporaneously both in scientific research and in art. If, on the one hand, the works of the ancient Greek philosophers and physicians penetrated into Italy and diffused through retranslations from the Arabic, and Avicenna, Rhazes and Mesue were made familiar to Italian students and to those who came from all parts of the world to the universities of the Peninsula in search of knowledge, on the other hand the famous Italian mercantile republics with unceasing trade with the countries of the Orient placed on the Italian market costly merchandise, carpets, engraved arms and multi-coloured pottery. In the period in which Italy prepared for the Revival of Learning, physicians, druggists, chemists and naturalists followed and directed the rapid and certain progress of scientific thought. Essences, drugs and medicinal substances from the Orient reached Italy in the brilliant majolica containers of Ibero-Arabic and Persian workmanship. And thus it is that the epoch rich in history, which induces the new life of civilisation and art in Italy, is that in which the pharmacies assumed greater importance, and the druggists who up to a few decades previously had been considered little better than herb sellers assumed a status fairly important. This occurrence carries with it a great development in the decorative art in the pharmacies. Already, commencing with the year 1400, druggists' shops were splendidly furnished; the counter and shelves were indeed praiseworthy objects of art and often paintings of great value adorned the walls. But the greatest artistic wealth and the most striking aesthetic note lies in the wonderful drug pots which are to-day most prized and which are preserved with the greatest care in museums and private collections. The drug pot or specie jar of that period ("albarello" in Italian), probably of Oriental origin, and perhaps the most ancient container employed in the pharmacy, is characterised by its cylindrical shape, and was primarily destined to contain thick and viscid substances, above all, fruit pulp or preserves, which had an important place in monastic *materia medica*. On account of this fruits are frequently depicted in the decorative work of these jars, and often the jars themselves are reproduced in the celebrated paintings of that age as in the picture of "S. Girolamo" (National Gallery, London) in the "Annunciazione" of Crivelli (*ibid.*), in the Carpaccio (Dublin Museum), in the Van Gogh (Uffizi), and in the painting of Teniers representing the alchemist.

The first specie jars of which there is documentary evidence are mentioned in a parchment dated January 25, 1478, discovered by Ludwig in the State Archives of Venice, and the first jars of truly Italian character are those depicted in the interesting lunette fresco which is to be found in the atrium of the famous castle of Issogne in Val d'Aosta, previously mentioned by Carbonelli, a reproduction of which appeared in the *C. & D.*, June 29, page 804. The painting must date from the end of the fifteenth century or from the beginning of the sixteenth. It is a faithful reproduction of the scene which takes place in a pharmacy of the period, and is worthy of note on account of the exactitude of the details. On the counters stand cases and boxes of various shapes and colour; on the four shelves are ranged bottles, wide-necked containers, jars, and large wooden boxes. The eighteen bottles of terracotta are painted in green, labelled, and are supposed to contain medicated waters: *acqua boraginis*, *plantaginis*, *violarum*, *batosse*, *melisse*,

fabarum, absinti, rutae, liliorum, succorie, betonice, feniculi, berberis, vite, valeriane, while on the last bottle only the letters "aeg" can be read. On the second shelf stand the spouted jars, or "capruncole," as they were called at that time, to contain oils. The labels, deciphered by Carbonelli, show that in the pharmacy on the fresco at Issogne were kept otto of rose, oils of laurel, olive, mandrake and almond. Other jars, properly labelled, stand with the wide-mouthed bottles, and here are depicted the three types of container used in an Italian pharmacy.

RISE OF THE HOSPITALS

During the first half of the fifteenth century Italian art made itself conspicuous in the large pharmacies. Those of the great hospitals, S. Maria della Scala (founded in 1349) at Florence, and at Siena, were richly and beautifully decorated. There, as in the private pharmacies of the princes, were to be found those rare drug pots decorated in relief, few of which are now preserved. This expensive ceramic ware was imitated, probably at some earlier period, in order to replace any in case of breakage. The druggist demanded from the artist greater fervour of work and a greater nicety in workmanship. These great hospitals, the wards of which are decorated with frescoes by the most celebrated painters, whose façades are ornamented by the work of the immortal Della Robbia, and whose architecture constitutes an important record of Italian art at the Renaissance embellished through the genius of artists like Bramante and Brunelleschi, also wished that the pharmacies might be also works of art and contain exquisite examples of craftsmanship. On the large shelves of wood carved by master hands are arranged

the drug pots which came from the celebrated Tuscan and Faentine potteries, jars which bear the arms of Florence, the "marzocco," or the fleur-de-lys, or the arms of the Scala. The jars decorated in blue, in slight relief, have been described by Wallis, who lists some forty odd, and by Bode. These are among the most important and most marvellous examples of this art in the early fifteenth century. The decoration became more and more varied, and soon the name of the medicament was written on the front of the jar. Thousands of jars, after the best Italian artists, decorated these old pharmacies and gave them a tone of beauty and splendour that ennobled the surroundings. After 1500, when all aspects of Italian life were pervaded by the spirit of the Renaissance, medicine freed itself from Arab influence and took a decided turn towards the liberty of research. Pharmaceutical science also showed greater progress, and Italian druggists obtained in all Europe bigge, renown for the perfection of their preparations, which were recognised and sought for everywhere. The physician, whose life is intimately linked with that of the druggist until this period, detaches himself from the pharmacy in order to take up clinical study.

But the initial epoch in the history of the pharmacy, when it was the centre of scientific discussion and professional controversy, when the first attempts at chemical experiment were made there, when the shop was one of the centres of intellectual and political life and the druggist rapidly assumed an important rôle in social life, merits particular consideration. In those centuries when scientific thought was born and craft corporations were founded with rules for their members' guidance, the figure of the druggist emerges clearly from the background of Italian life.

While the Customer Waits

DURING a busy period, it is almost inevitable that some customers are kept waiting until an assistant is free to serve them. The majority of such customers wait without demur; but there is a percentage who go away unserved, in the hope that in some rival establishment they may receive immediate attention. Even the customer who is in a hurry, however, can be induced to wait, if his interest is held by some display. It must be admitted that the average showcase and counter display, however tastefully arranged, is seldom sufficient to relieve the tedium of waiting.

There are many processes in connection with the making up of drugs and the dispensing of prescriptions which are complete mysteries to the public. Some of these could be made into an exhibit which would hold the attention of the most blasé person. It would not be difficult to arrange with some wholesaler or chemical manufacturer to obtain a display showing the precautions taken in the choice of the raw materials. Actual samples of the product in various stages of refinement could be shown, with coloured photographs of some of the machinery and tests through which it has to pass before being accepted as conforming to the manufacturer's standard of purity. The display should be accompanied by clearly written descriptions of each step in manufacture; the precautions taken to prove cleanliness of the container, the professional qualifications of the chemists employed—all these could be brought out in the exhibit and would be absorbed by waiting customers, who would gain a new idea of the skill of the chemist.

In a similar way, an exhibition could be made of the making up of a prescription. Beginning with the doctor's form as received by the chemist, the display could show the prescription in English, following on with an illustration of the process of dispensing. Where space permitted, each stage of dispensing could be shown with the actual drugs and chemical apparatus employed. The time taken for certain chemical changes to be completed would be explained, so that there would no longer be those complaints about having to wait ten minutes while prescriptions are being made up.

The chemist should give prominence to preparations made locally. In large chemical works, there are many

employees with friends and relatives in other parts of the town, and these people willingly buy goods made in the factory in which their friends were employed, if they have the information brought to their notice.

A waiting queue may be rapidly reduced if the counter service is organised for speedy service. Every product in ordinary demand should be easily reached and should be kept packed in the most commonly required unit, ready to hand to the customer. One person should be instructed to obtain additional supplies of small change whenever the reserve falls below a certain pre-determined level. Nothing is more exasperating to a customer in a hurry than to see an assistant carrying out his duties in a leisurely way, as if time were of no concern. All assistants should be trained to serve quickly and efficiently. Those who are waiting for prescriptions to be made up should be accommodated with chairs away from the ordinary serving counter. There is only one way to prevent the leakage arising from customers who will not wait, and that is to hold their interest and speed up counter service.—W. A. G. M. (15/11).

A Note on Holly

At one time holly was highly valued as a medicinal agent, although few would to-day care to tackle it in the heroic fashion of its advocates of a bygone age. The berries, taken in doses of from fifteen to twenty, were esteemed in windy complaints or colic. Dr. Rousseau, in his treatise on "Holly," stated that he cured scores of cases of fever by the use of this plant alone, and he discovered a bitter principle (which he termed ilicine) in the leaves. His method of preparation was as follows:—"Make an alcoholic extract of the leaves of holly, which should be mixed with water, and treated with subacetate of lead, sulphuric acid, and carbonate of lime; add alcohol, and the resultant product when dried is ilicine." This, the learned doctor stated, was more valuable than the Jesuit's bark, and used for similar purposes. Apparently his belief was disproved, since Jesuit's bark, in one form or another, is to-day in universal use, whereas the popularity of holly centres in its romantic memories as a Christmas decoration.—HISTORICUS (18/12).

A MEMORABLE FUNCTION

Banquet in Dublin to Mr. Francis J. Fitzpatrick

A TRIBUTE to the remarkable achievements of Mr. Francis J. Fitzpatrick, P.C., Ph.C., president of the Pharmaceutical Society of Ireland, on behalf of Irish pharmacy, was paid to him on December 10, when a banquet was given in his honour in the Metropole Ballroom, Dublin, and a handsome presentation was made to him. The particular service rendered by Mr. Fitzpatrick to pharmacy which the promoters of the function had in mind was the part played by him in securing the holding of the 1929 meeting of the British Pharmaceutical Conference in Dublin. It was felt by the Local Committee of the Conference that the outstanding success of that event, largely due to Mr. Fitzpatrick's enthusiasm and energetic labours, should be commemorated in some signal manner, and a committee embracing all the Conference committees was formed under the chairmanship of Mr. Denis J. Nugent, vice-president of the Pharmaceutical Society of Ireland, with Sir Thomas Robinson and Mr. Victor E. Hanna as secretaries. The project was warmly taken up and became a gratifying success, the banquet being attended by a large party representing the Church, the Dail, and the professions of medicine, law, pharmacy, etc. Mr. Fitzpatrick had already received another remarkable testimony to the confidence placed in him by his colleagues of the Council who elected him to the presidency of the Society for the fourth year, a compliment paid to only two former presidents in the history of the Society, Professor Tichborne and Mr. William Hayes.

Mr. DENIS J. NUGENT, vice-president of the Society, who presided at the banquet, read a telegram of congratulation from Mr. R. R. Bennett, chairman of the Dublin meeting of the British Pharmaceutical Conference. The chairman called on Sir Thomas Robinson to propose the toast of the evening.

THE TOAST OF THE EVENING

Sir THOMAS ROBINSON said he felt it a great honour and privilege to move the only toast that could be moved there that night, and that was the toast of their guest, Mr. Francis J. Fitzpatrick. The banquet was the outcome of the meeting of the British Pharmaceutical Conference held in Dublin last June; and he thought it would be no harm if they might recall some of the incidents leading up to that very successful event. The British Pharmaceutical Conference was a very old and valued institution in connection with pharmacy. Membership was open to every qualified pharmacist, and

its main function was to promote the post-graduate education of its members, to keep abreast of all new developments, and to encourage research work. A yearly meeting in a selected centre had, for over sixty-five years, attracted followers of pharmacy, and it was owing to the devotion of its members, such men as Redwood, Attfield, Martindale, Claridge Druce and the late Professor Tichborne, that pharmacy had attained the important position it now occupied.

This was a brief *résumé* of the objects of the British Pharmaceutical Conference which met in Dublin last June. Mr. Fitzpatrick had enough confidence in himself and his Council to give all the guarantees required in order to have the invitation to visit Dublin accepted. The Conference did not go to every town to which it was invited. They felt that it was only fitting that the capital of the Free State should maintain the high traditions of the country for hospitality and for a deep and keen interest in the scientific character of the work of the Conference. It was only right to say that their president was supported enthusiastically by his colleagues on the Council and on the Executive Committee which he called together. Indeed, so strongly was the matter taken up that it became not only a Dublin function but a great national event. The Commissioners of the City placed at their disposal the Mansion House and other rooms. The Mansion House also supplied the necessary accommodation for the social functions. The Conference



Photo] MR. FRANCIS J. FITZPATRICK, P.C., PH.C. [Davis, Dublin

was welcomed by their popular President of the Executive Council of the Free State (President Cosgrave) and Mrs. Cosgrave. The first meeting of the Conference was opened by Commissioner Murphy, who attended with his colleagues, Commissioners Dr. Dwyer and P. J. Heron. During the week his Excellency the Governor-General and Mrs. MacNeill honoured them with a reception at their residence in the Park. The directors of Boileau & Boyd, Ltd., the oldest manufacturing chemists in Dublin, provided a most delightful party at the Zoological Gardens, and the famous firm of Arthur Guinness, Son & Co., extended hospitality to their members who visited the brewery. They would see that they had good reason to invite their president, Mr. Francis J. Fitzpatrick, to that banquet in order adequately to place upon record their appreciation of his untiring work. Inspiration played as great a part as energy with their friend Mr. Fitzpatrick. Another authority in success gave the formula: "Keep everlastingly at it." That too was what their guest did all the time. There was no rest while there was work to be done. With

Mr. Fitzpatrick pushing them on, they really deserved the success which they had attained. Looking at the whole event, he felt very strongly that their president reflected great credit not only upon pharmacy in the Free State, but upon the country. They had held their own with the great centres of industry across the water where the Conference was in the habit of meeting. Indeed, it was the opinion of all their visitors that a more successful Conference had never been held. Those of them who knew their guest of the evening knew what a very good fellow he was. He came into the limelight in the Council some four or five years ago, and he had developed wonderfully in that time an amount of energy and foresight and an amount of ability that had been greatly appreciated by those who had been associated with pharmacy in this country. He had made study of the laws governing pharmacy in this country, and was a great authority on the subject. It was a great happiness to be allowed to propose this toast. He was to be supported by the president of the Pharmaceutical Society of Northern Ireland, his friend Mr. Storey; and it was a happy thought that they had a representative of that Society present. (Applause.)

SUPPORT FROM NORTHERN IRELAND

Mr. FRED STOREY, president of the Pharmaceutical Society of Northern Ireland, said he considered it a great honour indeed to be asked to support this toast. He was very pleased to follow the footsteps of his good friend and countryman, Sir Thomas Robinson. He could speak with some knowledge of the work done by their guest of the evening, Mr. Fitzpatrick. He could well remember Mr. Fitzpatrick's entry into that august body, the Council of the Pharmaceutical Society of Ireland. They had had five years' experience of the working of the Northern Ireland Act by which they had tried to improve pharmacy and raise the status of pharmacy in the North. They considered it a very good Act. There were defects in it, and there were things that did not get into it. They had done the best that they could. He knew that Mr. Fitzpatrick and members of the Council had devoted an immense amount of time and work in connection with the Free State Bill. He also knew from his own experience that they would have a tremendous responsibility. Mr. Fitzpatrick was a thorough man; he was enthusiastic, energetic, and full of life, one of those men on whom they could rely to carry out what he set himself to do. Mr. Fitzpatrick had done a great deal to help his fellow pharmacists throughout the Free State and to help pharmacy as a whole. His (the speaker's) membership of the Council of the Pharmaceutical Society of Ireland was associated with very fragrant and happy memories; and he had had the pleasure of revisiting that day the old battlefield. He did not always see eye to eye with Mr. Fitzpatrick, and Mr. Fitzpatrick did not always see eye to eye with his ideas. They had many a fight over the table. But that did not interfere one iota with their friendship. The best testimony to their guest of that evening was the fact that he had been elected for the fourth year in succession as president of the Pharmaceutical Society of Ireland. Although at one time a number of the Colonies had accepted the Irish certificate, they dropped that attitude one by one when they found that Ireland could not reciprocate. In their Act in Northern Ireland they got powers to have reciprocity. Speaking of reciprocity, Mr. Storey said his view was that when a man became a pharmaceutical chemist, he should be able to take his certificate anywhere amongst the English-speaking races. The new Society would have certain claims to the funds, and so would the Society of Northern Ireland. ("No, No," and laughter.) He was very glad to be with them again. (Applause.)

Mr. NUGENT then proceeded to make the presentation to Mr. Fitzpatrick of a handsome silver rose-bowl and a photographic portrait of himself. The rose-bowl contained the following inscription: "Presented to Francis J. Fitzpatrick, Esq., P.C., president of the Pharmaceutical Society of Ireland, at a complimentary banquet by the Dublin Committee of the British Pharmaceutical Conference, 1929, in recognition of his services as chairman. December 10, 1929." In making the presentation, Mr. Nugent said that Mr. Fitzpatrick had really been a tower

of strength to pharmacy in Ireland. He (Mr. Nugent), who had been associated with him in practically every move that he had made, knew perhaps better than most of them what he had done. No man could possibly do better work for pharmacy than Frank Fitzpatrick. He hoped, and he was sure every one present joined in the hope, that Mr. Fitzpatrick would be spared many, many years to look upon this rose-bowl and remember that the pharmacists of Ireland were deeply grateful to him for his work, and that he would be always remembered by them with gratitude and affection.

The toast was enthusiastically honoured.

MR. FITZPATRICK'S REPLY

Mr. FITZPATRICK, who was received with prolonged applause, said he felt that any words of his could only convey to them very imperfectly the gratitude he held in his heart for their wonderful kindness to him that night. Were it not for the Council and the magnificent team of workers they could not possibly have brought the work to the success that they had achieved. If he had not been assured of the confidence of his Council in him he would not have dreamt of issuing an invitation of such magnitude. It was the committees that were responsible for the wonderful work that had been done in connection with the Conference. He appreciated sincerely their beautiful gift. There was not a member of the Council who had not put his whole heart into its work. He would like to thank Sir Thomas Robinson for his flattering remarks. Mr. Storey had honoured them by coming from the North of Ireland to show his appreciation of the work of the Conference. He wanted to thank their chairman for his kind remarks; and last, but not least, to thank Mr. Victor E. Hanna, who never spared himself to secure the success of their work. They had with them that night a gentleman who had braved the Channel crossing and its discomforts to be present. He alluded to Mr. Lawman, chairman of Vinolia Co., Ltd. Mr. Lawman was associated with the Conference that had been held in Dublin last June, and it was fitting that he should be present with them. Nothing, concluded Mr. Fitzpatrick, would give him more pleasure than to keep on working for Irish pharmacy when he had such a magnificent team supporting him. He thanked them very much.

Mr. F. A. LAWMAN, in a brief speech, said that the Conference in the hearts and minds of the English visitors was a happy memory that would be treasured by them always. Dublin and Ireland, he was sure, would be visited by many more English people than ever before. They owed a deep debt of gratitude to Mr. Fitzpatrick for having organised so successfully such a wonderful affair.

WHO WERE THERE

An enjoyable concert followed, Madame Florrie Ryan, Mr. D. J. Nugent (vice-president), Mr. W. Lemass, Mr. Joseph O'Reilly, Mr. A. F. Roche, Mr. J. A. Walsh, and Mr. Sealy Jefferes contributing to a pleasing programme, with Miss Lucy Lenane as accompanist. Mr. T. J. Doyle, P.C., proposed a vote of thanks to the artists, which was passed with acclamation. A ball followed, the banquet company being supplemented by a party numbering several hundreds. Dancing continued to an advanced hour in the morning.

The following members of the Council of the Pharmaceutical Society of Ireland and their wives were present: Mr. D. J. Nugent (vice-president) and Mrs. Nugent, Dr. M. Ryan (treasurer), Mr. P. A. Brady and Mrs. Brady, Mr. T. Costelloe and Mrs. Costelloe, Mr. T. J. Doyle and Mrs. Doyle, Mr. W. Gannon (Maryborough), Mr. J. Gorry and Mrs. Gorry (Naas), Mr. P. Brooke-Kelly (Enniscorthy), Mr. M. J. Kieran (Drumshambo), Mr. P. Kieran (Ballinamore), Mr. P. D. Larkin and Mrs. Larkin (Drogheda), Dr. J. A. Mitchell, Sir Thomas Robinson (joint secretary), Mr. J. J. Roche, Mr. J. Smith, Dr. J. A. Walsh, Mr. D. Warwick and Mrs. Warwick, Mr. J. J. R. Kerr, P.C. (registrar) and Mrs. Kerr. Apologies were received from the three remaining members: Mr. Fielding (Cork), Mr. Liston (Limerick), and Mr. McCormack (Wexford).

There were also present: Mr. F. Storey (president of the Pharmaceutical Society of Northern Ireland) and Mrs. Storey, Mr. F. A. Lawman (Port Sunlight), Mr. Adamson (Ballina), Mr. B. R. Alshire, Dr. J. Ashe, Mr. F. Barragry, Mr. W. M. Birmingham, Mr. A. A. Brunner, Dr. A. E.

Boyd, Mr. Cahill, Mr. R. Campbell, Mr. T. Campion, Miss Campion, Miss H. Campion, Mr. T. Carey, Mr. D. Carroll, Mr. E. Collins, Mr. W. Collopy, Mr. and Miss Conlan, Miss E. Corbett, Miss P. Corbett, Mr. J. S. Corcoran, Mr. F. and Miss Daly, Mr. and Mrs. Dargan, Mr. Gilbert Davies, Mr. Deery, Miss Deery, Mr. G. Dowdall, Mr. P. A. Dowling (L. C. & D.), Miss F. Dunne, Mr. J. Duggan, Mr. J. T. and Mrs. Dwyer, Miss Dwyer, Mr. A. Farrington and Miss A. Farrington, Mr. Flynn, Rev. F. Frewen, Mrs. F. J. Fitzpatrick, Miss Gillegahan, Mr. Sealy Jeffares, Miss E. Griffin, Mr. Victor E. Hanna, P.C. (Joint secretary) and Mrs. Hanna, Miss B. Hayes, Mr. Hegarty, Mrs. Hewson (Ballina), Mr. and Mrs. A. Hughes, Mr. W. Jones, Mr. P. J. Killacky, Dr. Myles Keogh (T.D.), Mr. and Mrs. I. T. Keogh, Mr. and Mrs. W. Lemass, Mr. J. Lennane, Miss Lyons, Mrs. Lyons, Dr. Lundie, Mr. W. Lundie, Mr. and Mrs. Markin, Mr. F. Meagher, Mr. W. Campbell Meeke, Dr. McKeever, Mr. J. V. McKeever, Mr. J. Miss-tear, Mr. O'Brien, Mr. and Mrs. J. O'Byrne, Mr. M. J. O'Callaghan, Miss O'Farrell, Miss O'Hair, Mr. N. O'Malley, Mr. J. O'Reilly, Mr. and Mrs. O'Phant, Miss O'Phant, Miss D. O'Phant, Dr. and Mrs. O'Donnell, Mr. C. Purdie, Mr. F. G. Pollard, Miss Redmond, Mr. F. Robinson, Mr. A. F. Roche, Mr. and Mrs. W. H. Roche, Miss Roche (senr.), Miss Ryan, Mr. V. Sargent, Mr. and Mrs. T. J. Smith, Mr. R. Spence (Castleblayney), Mr. and Mrs. Swullen, Dr. and Miss Tomkin, Miss Thompson, Mr. J. Walsh, Mr. F. W. Wyatt, Mr. Wayte, Mr. J. G. Wilson, Miss Willoughby, Mr. R. Willoughby, Mr. and Mrs. Young.

The banquet secretaries (Sir Thomas Robinson and Mr. Victor E. Hanna) are so well known, not alone in Irish Free State pharmaceutical circles, that the success of such a function was assured. Their joint forces left nothing to be desired to those who had the privilege of attending that which will be handed down as an historic gathering.

"My Quiet Sunday Morning"

By M.P.S.

SATURDAY is over at last, and, with a sigh of relief, I lock up for the night. Thank goodness, to-morrow is Sunday and I can have a little peace and quietness. It has been a busy week and I decide that I will have breakfast in bed, for I really feel I have earned a jolly good rest. This is how I rested :

Sunday morning, 7.30. Ting-a-lin-ling . . .

(Voice from other bedroom) : "Daddy, wanted on the phone."

I get up hurriedly and go down to answer the call. "Hullo, is that the chemist?"

"Yes," I reply wearily.

"Are you open yet?"

"We don't open Sunday, but you can get anything urgent if you knock us up."

"Thanks; all right. Good-bye."

Ten minutes later. Furious onslaught on the door.

"I am awfully sorry to bother you so early, but could you let me have a Brownie film, we are going out for the day? I rang you up just now to see if you were at home before I bothered to come down."

He departs with his film and I return to bed, to doze fitfully for a while, eventually making up my mind to get up, after all; it seems such a lovely day, we might as well go out in the car.

I am just sitting down to breakfast when there is another raid on the door. This time I answer it myself. An angry customer confronts me, saying he has put one and twopence in the automatic film machine and the beastly thing won't work and he has a train to catch. I get the key and open the machine, only to find that he had put two sixpences and two pennies in, whereas, of course, the machine only likes shillings. He departs, still insisting that the beastly thing ought to have worked properly.

I manage to finish my breakfast without any further interruptions, and go down to the garage to get the car ready. (Voice in the distance) : "Daddy, wanted on the phone."

"Is that the chemist?"

"Yes."

"Are you open yet?"

"No, but you can get anything urgent if you knock us up."

"I understood it was compulsory for chemists to open on Sundays; however, as it is very urgent, I will send down."

Ten minutes later. The bell rings and I open the door. A lady enters.

"I called you up on the 'phone just now. You see, we are going on a motor drive, and I cannot possibly go without my powder. Have you got —'s in the latest sunburn colour?" she asks, quoting an expensive French powder.

"I am sorry, but that is rather an unusual powder. We do not stock it. Would another make do?"

"Certainly not, that is absolutely the only one that suits my skin. I could not possibly use any other. Of course, I usually shop in town, but, being Sunday, I had to come here. Good morning."

As she goes out a child enters and says : "Please, mother says you gave me sixpence short yesterday." I hand over the sixpence which the youngster had left on the counter the day before.

The door is just closing as someone comes in with an Insurance prescription to be made up. It is dated three days previously, but the bearer says : "Please would you make it up at once. Father's had such a bad turn." I make it up, and then the child says she has no money with her and will I book the bottle?

Just as this transaction is closing, a lady comes hurrying in with a screaming baby in a "pram."

"Oh, please, can you do anything to help me? I have been to the doctor's, but he's away for the day, and baby has swallowed a farthing. What can I do? My neighbour says I ought to give him half a large suet pudding, and someone else says turn him upside down and tickle his throat with a feather. Which do you think would be best?"

I suggest that possibly a good dose of castor oil would help, and she agrees to give it to him at once. Baby has ideas of his own on the subject; he seems to object strongly to this treatment, and during the struggle to get him out of the chariot the missing farthing drops to the floor from the baby's clothes. The spoonful of castor oil trails round the floor, while the baby gets a good scolding.

"You naughty boy, to give me all that trouble for nothing," remarks the lady, as she departs with her infant without having offered to pay anything. After she has gone I find that she has put the oily spoon down on a box of expensive soap.

My next caller is a little boy who wants Mrs. Smith's "snaps." She forgot to call yesterday, so please could she have them now? I find that we have several lots of snaps under the name of Mrs. Smith, and as he does not know which ones he wants he departs without. As he goes out a charming girl comes in to ask if I could lend her a bicycle pump. I lend her one, and then the coast apparently being clear again I depart once more to the garage. By this time it is fairly late, so we decide to go after lunch.

That confounded bell again. This time twopenny-worth of castor oil is needed; then comes a child holding a bottle with one of my labels on it. I ask her what she wants, but get no answer. I repeat the question with the same result, so decide that she must want the same prescription made up again, and I proceed to make it up. Apparently she has no money, but, knowing her name, I enter it to the customer's account. A few minutes later her sister, a little older and not so shy, comes back with the bottle of medicine, saying that "Mother did not want the medicine; she only wants the twopence on the bottle, and please could I give her an empty box?"

We live near a very dangerous cross-road, and the next caller is the local doctor, who has been summoned to attend a bad motor smash, and has run out of bandages and dressings; he says he would be glad if I would come along in his car and help him, as there are several people to attend to. I go, but the thought flashes through my mind as to who will pay for our help—no one, probably, if past experience is anything to go by. I have hardly had what I should call a rest, and I don't seem to have made a fortune either; but perhaps I have been helpful to a few people and this is, after all, the way goodwill is built up.

The Care of the Tooth-Brush

ALTHOUGH numerous additions to the lists of proprietary tooth-brushes appear annually, there does not appear to be anything strikingly new in the merits of one article over the other, and it can therefore be concluded that the industry is almost perfect. We do not suggest that one brush is as good as any other, for quality can always obtain its price in spite of the rampant practice of cutting, but we contend that the comparative similarity of all tooth-brushes as regards design indicates that marked improvements are no longer possible. The tooth-brush may yet be replaced by some other form of hygienic device better adapted to personal mouth hygiene, but up to the present no suitable substitute has been found. In this connection a paper by J. H. Kauffmann, in a recent issue of the "Dental Cosmos," is of interest, as the author has made an exhaustive study of all manner of dental brushes. This paper is supplementary to one which was commented upon in the *C. & D.*, March 1924, p. 446. It is difficult to arrive at exact figures of the number of brushes used annually owing to lack of reliable statistics, but the author estimates that only fifteen per cent. of the American population use brushes at all. Another statistical chart on modern tooth-brushes has been compiled since the previous report, and the tabulated observations indicate the scope of the paper. The question of bristle play is a practical one of vital interest to all concerned, and the thing to be avoided by manufacturers is great bristle length, since long bristles, by increasing the pivoting arc of each bristle, reduce the friction produced by the general movement of the brush. The brushing area considered as a plane should be slightly concave when seen from above (downwards), and when viewed in a lengthwise direction. The concavity should be nicely graded with its greatest dip at about the centre of the tufts, and from side to side the brushing area should be straight.

Sanitation of the tooth-brush deserves very important consideration. There are many able and intelligent persons who are opposed to the use of the regulation bristle brush chiefly on the ground of its constant contamination by the pathogenic flora resulting in the defeat of the original intention. Without a doubt bacteriological tests prove tooth-brush contamination, but upholders of the use of the brush maintain that a "vaccination" of the oral mucosa is constantly going on if reasonable means are used to minimise the risk. It is argued that pathogenic cultures can be obtained at any time from the oral cavity, even at birth, with or without tooth-brush use. Many distributors pack the products in sanitary fashion, and with the understanding that the brush is given to the user in a sterilised condition. The author is of opinion that before each cleansing the brush should be held in warm water, and disagrees with the belief in the use of totally dry bristles. Several methods have been advocated for the sanitation and drying of the tooth-brush when not in use. One is to suspend the brush in a clean and dry place exposed to the sunlight so as to facilitate its drying, because undried bristles become musty, discoloured and flaccid. Brushes should never be thrown together within a common family tumbler, especially in the unbecoming environment of the usual household lavatory. A popular method is to keep the brush in a closed container which serves also as a receptacle for a disinfectant preparation, such as formaldehyde. Another choice is a plain glass or celluloid individual holder, so ventilated that atmospheric oxygen can freely enter to aerate the brush and allow moisture to evaporate. A damp room or one with considerable steam will inhibit the drying of the brush, and should be avoided. Others advise the use of table salt sprinkled on the bristles to absorb moisture, in conjunction with one or other of the above methods. There is room for improvement in the field of tooth-brush sanitation, and inventive minds have something here to ponder over and devise. An unclean tooth-brush is not only useless, but dangerous, and much worse than none at all. A tooth-brush should be renewed every three months at the longest. The use of two brushes is an excellent idea, since one can thoroughly dry while the other is in action, especially when the teeth are cleansed morning and evening. The

tendency is to make brushes better as well as cheaper, so that there is no undue burden on the pocket of the customer, who will find that by this two-brush scheme his brush lasts much longer. Many angles of the tooth-brush question hinge on arbitrary points, and so we have a multitude of devices having a minor bearing on the main use, and the brush which gives satisfactory service to some in spite of its inability to please everyone may well be persevered with. There are widely divergent views on points of design, but the subject is probably largely one of fashion, and so long as adequate friction is possible and the bristles are of good quality, there will always be keen rivalry to secure the expanding trade.

Taste and Chemical Constitution

By J. G. F. Druce, M.Sc. (Lond.), R. Nat. Dr. (Prague), F.I.C.

MANY substances when placed upon the tongue produce an effect which is termed "taste." The connection between taste and chemical constitution has not attracted much attention, and so far only a few facts have been correlated to trace the effect of certain elements and groupings upon the taste of a compound. It is general to distinguish a substance as possessing a (1) sweet, (2) bitter, (3) acid, or (4) saline taste. When a finer distinction is required it is usually expressed by comparison with the taste of a well-known body. Substances which are insoluble in water, or rather saliva, are tasteless. Almost all acids have a sharp sour taste. This is very noticeable in dilute solutions, and thus it is reasonable to associate the acid taste with hydrogen-ion concentration. On the other hand, extremely dilute sodium or potassium hydroxide solutions have a taste which suggests sweetness, and this would indicate that the hydroxyl group is associated with the sweet taste. Polyhydric alcohols (e.g., glycerin) are also sweet, as are most of the sugars and carbohydrates, but it cannot be said that sweetness increases with the number of hydroxyl groups in the molecule. Among the inorganic compounds, the salts of lead and beryllium (also called glucinum on this account) are sweetish. Most salts, however, possess a more or less saline taste, but many sulphates are bitter as well. The German name for magnesium sulphate (Bittersalz) expresses this forcibly.

That taste has some connection with constitution is more easily inferred by a consideration of certain organic compounds. Members of the same homologous series usually show a similarity in taste as in other properties. Bitterness increases as a series is ascended (i.e., with increase in molecular weight), and sweetness similarly diminishes. The introduction of a nitro-group also augments bitterness, while amino-compounds are usually sweet. *m*-nitro-aniline is sweet, but the *ortho* and *para* compounds are bitter. Some other compounds in which the nitro- and amino-groups are in the *meta* position show a sweet taste, so that it would seem that isomeric compounds can show differences, and the arrangement of the molecule can also exert some influence upon the taste of a compound. This is well illustrated by the three nitrobenzoic acids. The *ortho* acid is sweet, the *meta* is hardly so, whilst the *para* compound is quite bitter. There are many instances of dextro- and levo-isomers showing different properties as regards taste, and syn- and anti-oximes also show differences. Thus, syn-anisaldoxime is tasteless, while the anti-compound is very sweet. Esters, which frequently possess very pleasant odours, have a tendency towards bitterness while being "aromatic" in flavour. Acid amides are generally sweet, but the polypeptides are often bitter. Most sulphur compounds have an unpleasant if not bitter flavour. The foregoing instances should afford some evidence that there is a noticeable connection between taste and constitution, but before this connection can be fully expressed it would seem to be necessary to devise a less restricted nomenclature than that given above.

THE death is announced of Canon H. E. Nolloth, the sponsor last year of a reputed cure for alcoholism, based, apparently, on red cinchona bark.

A VISIT TO CARTWRIGHT'S

THIS month W. B. Cartwright, Ltd., Rawdon, near Leeds, having been incorporated on December 22, 1908, celebrate their twenty-first birthday. The progress that this firm has made since its inception is noteworthy on account of the way in which its scope and activities have been extended and increased, until, from quite a small beginning, it has grown into an enterprise of considerable pharmaceutical importance.

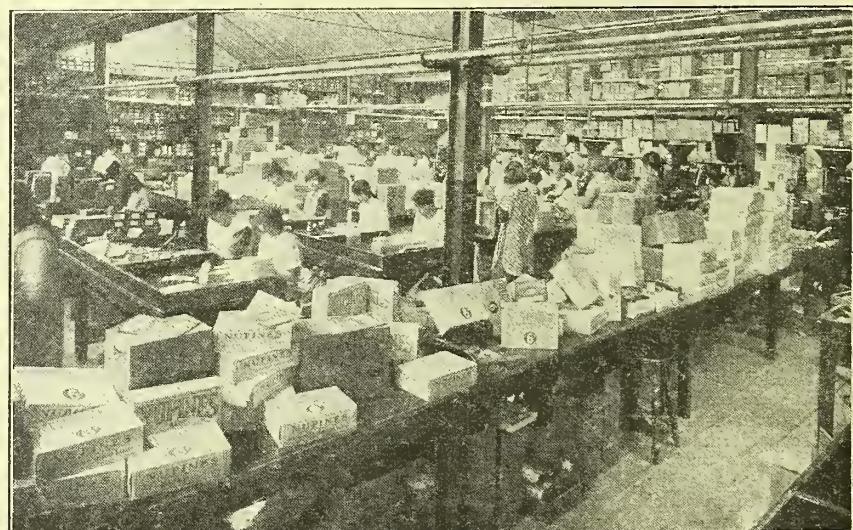
W. B. Cartwright was a traveller, who, some twenty-five years ago, in his calls on chemists on behalf of the firm of label printers which he represented, was able to appreciate where the average retail chemist was losing ground in competition with the cut-price tactics of the chain stores. Thus he came to the conclusion that it was largely due to the advertising and superior window dressing with appropriate showcards and display material that the store chemists forged ahead and were able to progress while the private chemist could make no headway at all. His rounds forced on him the inevitable conclusion that the average chemist's window was merely a resting place for a specie jar or a couple of carboys accompanied by much dust and many dead flies, while if any attempt at window dressing was made the window show was not usually a success owing to lack of showcards and display material. The type of showcard then in use by the cut-price stores usually drew attention to the value which a client received when dealing with them; for example, in the case of a bottle of packed tablets, the number of contents and price was clearly set out and compared with the value obtaining elsewhere. This style of showcard so impressed Cartwright that he felt certain that it could be disposed of among his retail chemist friends. He suggested this to his firm, but his employers were dubious as to the successful introduction of that type of showcard among retail chemists owing to the cost. W. B. Cartwright felt sure he could persuade chemists to buy the showcard and ordered a quantity himself, which he was able to sell. This gave him the idea of packing tablets for the chemists' retail trade, and so, having already a supply of suitable showcards, he bought tablets in bulk from a well-known firm of tablet and pill manufacturers, who are still in existence, and ordered a supply of containers from another firm. Thus equipped he packed tablets at home, and this was the nucleus around which W. B. Cartwright, Ltd., has grown. The packing of tablets was the initial idea, and in this venture he was joined by his brother-in-law, Mr. H. H. Tomlinson. As the business grew the tablet packing was done in a coachhouse, and as success continued two terrace houses finally formed the factory in Leeds, but it is in entirely different surroundings at Rawdon that W. B. Cartwright, Ltd., celebrate their twenty-first anniversary of incorporation.

The firm moved out to Rawdon in 1912 and occupied part of a woollen mill—the original portion of the mill is now used as the pastille room—which has been much altered and extended to suit their requirements. At this mill the first bale of Botany wool sent to this country was made up and a waistcoat length of cloth sent to His Majesty King George the Third in 1804. During

the Luddite Riots the mill was attacked by rioters, and in connection with this and other industrial troubles in the district seventeen persons were executed and six transported for a period of seven years. Mr. J. Rennie, the present managing director, joined W. B. Cartwright in 1910. The founders sold out their interest some eight years ago, and under Mr. Rennie, who has travelled extensively in the United States and Canada in order to become acquainted with better methods and improved machinery, the firm has acquired the position it now occupies. Mr. Rennie was at one time secretary of the North-East Lancashire Chemists' Association, and had retail businesses in Blackburn and Chorley.

The factory and warehouses now cover some 5,000 square yards and the employees number 200. The first operations of the firm were to buy and pack tablets, but from this has grown the extensive modern plant for the manufacture of tablets, pills, galenicals, pharmaceuticals, toilet specialities and perfumery. As before stated, with the exception of the machine room and pastille department the works are of modern structure, and alteration and extension to meet modern requirements is a continuous process. Steam and gas power have been superseded by electric, though an oil-fuel boiler is necessary to raise steam for pharmaceutical manufacturing operations, and the factory, seven miles from Leeds and situate at the top of a hill is in a clean, healthy atmosphere. There is a high-grade supervising staff, and, on account of the pleasant and healthy conditions prevailing, the work of packing attracts a maximum percentage of good-class girls, who find work here more congenial than under the conditions prevailing in the mills, and welfare work is well organised. On the premises is a canteen and a library, while a sick club and holiday fund are also part of the welfare scheme. Hours of employment are from 8 a.m. till 4.30 p.m., with one hour for lunch and a morning rest break of fifteen minutes. A tour round the works gives the visitor a good impression of efficiency and cleanliness.

THE CHEMIST AND DRUGGIST "Town Traveller," who was a visitor to the Lakeside Works recently, found himself very cordially welcomed in the well-appointed reception room by Mr. Gaunt, advertising man-



SECTION OF MAIN PACKING ROOM

ager, who had him shown round the plant under the guidance of Mr. Whalley, one of the staff. The offices were the first section visited, and here equipment is up-to-date. When an order is received from a chemist

five copies of it are made by means of one of the Underwood continuous manifold billers. A feature of this machine is that the carbons are automatically inserted and there is a continuous supply of forms from a roll. The receipt of the order is acknowledged to the customer, a traveller's copy is made, and the remaining three copies are for the use of the works, office and advertising departments respectively. The first two carry particulars of quantity, description, size or price, while the other folios are ruled so that particulars of the filling of the order can be inserted as it goes from department to department until finally nothing remains to fill in except particulars of dispatch, route, etc., by which the goods were sent, while the folios are filed for future reference after the goods have left the works.

PACKING ROOM

The main packing room, contained on the one floor and lit by the bright north light, is the largest section of the works, and here conditions of work seem to be ideal. Mechanical packing is done where possible, and mechanical aids to packing are numerous. Tablet packing is done both by hand and by machinery, and two tablet-counting machines are in use. The principle of these machines is that tablets fall from a hopper on to a toothed wheel, the teeth being ranged round the circumference, except at one portion, which is blank. As the wheel revolves the tablets fall between the cogs and are carried down to a container. When the blank portion of the wheel reaches its topmost point all the tablets have been filled into the container, which is automatically replaced. The machines in use here are for packing 50's or 25's. Powders are filled by means of a powder machine by the Young's Hygiene Bin Co., and a Molin's wrapping machine is employed for wrapping cartons of packed tablets, etc. This is the type of machine used for cigarette packing. The unwrapped cartons are stacked in a vertical feed at one side of the machine, and as they are fed in automatically they meet the paper, which is in a roll of suitable width, are wrapped, the paper is gummed and sealed and smoothed over by means of brushes, and the cartons are discharged almost hermetically enclosed at a speed of about one per second. A section of the packing room is devoted to packing wets, and is equipped with many machines for filling liquids, face creams, etc. There is a battery of Robert's fillers for most liquids, one having a special earthenware tank for hydrogen peroxide. A Colton tube-filling machine and automatic closure machine are used for filling pastes into collapsible tubes. A vacuum filling apparatus is used for olive oil, in which the air is drawn out of the bottle by means of a pump and the liquid to be filled sent up from a container by atmospheric pressure. Only sound bottles can be filled by this machine, owing to the necessity of forming a vacuum in the container. This is an advantage where an article like olive oil has to be filled, since a bottle of oil which leaks after packing is a nuisance and frequently is a cause of damage to other goods. Ginger wine essence is made in tanks, and these are provided with filling attachments and agitators so that the contents are well mixed. The storage tanks for olive oil are three in number, and hold from 120-140 gallons each. The oil, when received in drums, is pumped into a filter and run into its appropriate tank. Each tank is fitted with taps at different levels, so that the oil can be racked off after settling.

PASTILLE AND TABLET MAKING

The pastille room occupies the oldest portion of the building, and the making of good pastilles is the result of long training and experience. Cartwright's head pastille man has been making them for forty years and is justly proud of his products. Trays filled with starch powder serve as moulds, and after the impression of the pastille has been made therein by means of wooden patterns the molten gelatin base is poured into them out of five-spouted kettles, a practised operator being able to control to a nicety the "casting" (for want of a better term) of the pastilles. The trays are then put into a heated chamber, and the pastilles, when sufficiently dried, are taken out gummed and sugared, or,

if they are required with a glossy surface, they are stuck on points set in wooden holders, "washed" and again dried, when they take on that familiar shiny appearance.

As packed tablets are a speciality of the firm this might be attributed to the efficient working of the plant. The first process after the ingredients have been mixed together is that of granulation and drying. Granulation may be carried out by hand through sieves or in pans. Accurate control is exercised in all branches of tablet making, and checks are made at all stages of working and the record preserved. Moorland heart-shape digestive tablets are an old favourite, and the process they undergo is mixing of ingredients, granulation, powdering and drying, sifting and compression. A newly-introduced line is Fenasco influenza remedy in tablet form with an attractive pack, the carton and label printed in two colours—deep brown and pale blue. As sugar enters into the composition of many tablets, it must necessarily be in the finest powder. In order to make icing sugar Bossert "miracle" grinders are used. These grind the sugar and remove the finest particles by suction, and can deal with half a ton of sugar per day. The battery of tablet machines at Rawdon is working practically continuously, and the output of one machine is from three to three and a-half cwt. per day. Pressed pills and menthol and liquorice pellets are turned out also. The coating department is provided with nine huge coaters, and at the time of the visit these were busy on sugared almonds. Chemists' confectionery is a Moorland speciality, and the lines featured in this department are peppermints, sugared almonds, Pontefract cakes and fruit pastilles. This is a high-grade confectionery for the chemist, and as it reaches him the products are packed in cellophane bags in attractive display outers. The tablet plant, etc., is in charge of Mr. Luxford, the works manager. The newest addition to the plant is a mechanical bottle cleansing machine. This consists essentially of a tank to hold hot water in which the bottles can be soaked and washed. Revolving brushes are provided on the machine for cleaning the insides rapidly, and a rinsing rack on which the inverted bottles are rinsed internally by jets of water completes this portion of the plant. Drying chambers with hot-air draughts form the second component of the machine. Another recent addition to the plant is an automatic still for distilled water with an output of 200 gallons daily. Other machines in use include Wilkinson mixers for ointments and tooth-pastes.

Perfumery compounding is an important sphere and the perfumery mixing room contains some hundreds of essential oils and synthetics. The introduction of isopropyl alcohol in a high state of purity has made it possible for the English manufacturer to offer good quality perfumes at competitive prices.

There is strict analytical control of all operations, and the analytical laboratory is in charge of Mr. F. C. Savage, who was engaged in the determination of phenacetin when visited. Sampling and analysis is a continuous job, and the equipment of the laboratory includes a Kelvin, Bottomley and Baird ultra-violet quartz lamp. The warehouses and stores are separate buildings in the grounds, and are well and orderly arranged. Careful records of the stock are kept when goods are taken in or sent out, and landing platforms facilitate the loading.

PRINTING AND ADVERTISING

A word as to the printing section. Mr. Gaunt, advertising manager, and his assistants look after the designing of sales literature, show-cards and other sales aids, and these are designed and executed on the premises. The printing plant includes three platens and two flatbed machines, and those who have received Messrs. Cartwright's lists, etc., can see for themselves how excellently they are done. Carton cutting is also done, and particular attention is given to show material, the Cartwright service being to help the chemist to increase sales by the aid of quality products and modern presentation. Illustrated catalogues are published periodically, and many designs of display boxes have been issued, and the general tone of the advertising matter is dignified, not blatant.

Cultivation of Coca in Japan

THE "Yakugyo Shuho," of Tokyo, has published an article dealing with the cultivation of coca in Japan, from which it appears that the Health Bureau of the Japanese Home Office seeks to control the raising of raw material for cocaine within the Japanese Empire. It appears that the five manufacturers of cocaine in Japan designated by the Government have been importing coca leaves from the Taiwan Shoyaku Kabushiki Kaisha, but due to the variation of prices and other reasons, they planned to establish coca plantations of their own. The Hoshi Drug Manufacturing Co., it is true, has had its own plantation. Recently it has been reported that the Koto Drug Manufacturing Co. is planning to establish its own plantation in the Bonin Islands, while Takeda Chobei & Co. is also planning to have a similar plantation in Okinawa Island.

HOME OFFICE INTERVENTION

On the other hand, the Health Bureau of the Home Office which has jurisdiction over the cultivation of coca has drafted regulations for its cultivation, and has been deliberating on them for the past month or so. At a conference of the high officials of the bureau, including Mr. Yamada, chief of the bureau, Mr. Odate, chief of the medical affairs section, secretary Kameyama and two engineers, Messrs. Ako and Matsuo, the draft of the regulations was presented for their final decision, and was unanimously adopted. The regulations then were promulgated under Home Office Ordinance No. 37 on September 3 in the name of Minister Kenzo Adachi.

TEXT OF REGULATIONS

The following are the provisions of the regulations:—

Article 1.—Those wishing to cultivate coca must secure the permission of the Home Minister with the following items attached through the authorities of the locality where cultivation is to take place. (In Tokyo Prefecture the application shall pass through the chief of the metropolitan police and similar officials in other cases.)

1. The place and area of cultivation.
2. The time of cultivation.
3. The location of the buildings for the preparation and storage of the products.

When changes are made, after permission has been granted, a new application is to be made for permission. Those who have received permission shall make a report to the Home Minister through the local authorities within ten days after the planting of the trees, regarding the locality and area of the plantation. Permission shall be secured for replanting of coca with the foregoing three items attached, and a report thereof shall be made.

Article 2.—Those wishing to cultivate coca shall secure the permission of the Home Minister every year regarding the amount of coca leaves to be derived. Those who cultivate coca shall make a report to the Home Minister through the local authorities before the end of January every year on the amount of coca gathered and that transferred up to the end of the previous December as well as on the persons to whom the coca was transferred.

Article 3.—Those who have violated the Section 1 in Articles 1 and 2 shall be subject to a term of imprisonment not exceeding three months.

Article 4.—Those who have violated Section 2, Article 1 shall be subject to either a term of imprisonment not exceeding two months or a fine not exceeding 100 yen.

Article 5.—Those who have violated Section 3, Article 1, shall be subject to a fine not exceeding 100 yen or to detention or minor fine.

Article 6.—The regulation of punishment for the violators of the Sections 1 or 3 in Article 1 shall be applied also to the violators of Section 4, Article 1.

Article 7.—When a minor or a quasi-incompetent person has violated any provision of the regulations, the punishment therefor shall be inflicted on his legal agent.

Article 8.—The cultivators of coca shall not escape the punishment prescribed for the violation of the provisions of the regulations by their agents, heads, family members, those living with them, employees and other similar persons, on the ground that the violation was committed under their direct direction.

Article 9.—When a corporation's representative, or its employee or worker has violated the provision of the regulations, the punishment therefor shall be inflicted upon the representative.

SUPPLEMENTARY RULE

Those who are engaged in the cultivation of coca by the time these regulations are promulgated, shall be required to carry out the proceedings given in Article 1 within 30 days after the regulations have taken effect.

NARCOTIC CONTROL FORESHADOWED

With the coming into effect of the Geneva Opium Convention, the government authorities are planning to draft regulations on the control of narcotics in general, and the foregoing regulations are regarded as the forerunner of the contemplated measure. Regarding this point a certain high official expressed his view to a representative of the "Yakugyo Shuho" as follows:—

"Raw material for the manufacture of cocaine in the past has been imported from abroad. This was the case for many years, and there was no proposal for the cultivations of coca within the country because of the general belief that no portion of the Empire was suited for its cultivation. The officials of the Health Bureau drafted the new regulations because of the attempts by those interested in the manufacture of cocaine to cultivate the coca by themselves. As the situation has changed, it is only quite natural that new regulations should be promulgated to meet the new situation. They may be regarded as preliminary steps towards the promulgation of more general regulations."

Egyptian Drug Trade

IN the course of a report issued by the Department of Overseas Trade on the economic and financial situation in Egypt for 1928, written by the Commercial Secretary at Cairo (Mr. R. M. Turner, O.B.E.), it is stated that although the market for medicinal preparations, specialities, perfumery and cosmetics has been passing through a period of depression, the actual value of imports, which amounted to £E. 554,226, shows a small increase compared with 1927. Although France remains the largest supplier, her share amounting to about 45 per cent. of the total trade, the United Kingdom, whose imports stood at £E. 113,337, can also point to a certain increase in business. The decidedly difficult aspect of conditions governing the drug trade particularly has for some time been the price-cutting and unsecured credits indulged in by many local traders; and although leading druggists are now concentrating their efforts towards the realisation of fair trade with proper profits, many of the smaller dealers are naturally finding normal trading procedure difficult. There were four failures in Cairo among unimportant wholesale druggists in December and January, which rather affected confidence in the market as many druggists lost money in each failure. As, however, the drug and grocery trades are among the best organised retail elements in Egypt, the temporary depression in these businesses may be said to be due rather to reorganisation of their systems than to any financial crisis. At the same time United Kingdom firms who do business with Egypt, and are advertising, should be careful to maintain interest in their articles by seeing that it is worth the good retailer's while to "push" their goods, and credits should not be given to small firms just to book an order.

Care should also be taken to avoid flooding the market, as by so doing prices are often lowered when it comes to liquidating surplus stocks. In other words, United Kingdom firms should, when appointing an agent, whether British or foreign, insist on their representative building up the business on British lines and consider the future rather than be influenced by heavy initial orders which may prove in the end prejudicial to the solid interests of the firm. Representatives should be in constant touch not only with the wholesaler, but with the retailer. Imports of prepared disinfectants amounted to a value of £E. 10,713, of which the United Kingdom furnished just over 50 per cent.

The main competition in proprietary articles emanates from France, as there appears to be a predilection for French toilet articles, but American firms are also very active. The demand for toilet goods is slowly but gradually increasing.

Trade Report

The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers receive the goods into stock, after which much expense may be incurred in garbling, packing, etc. Qualities of chemicals, drugs, essential and fixed oils, and many other commodities vary greatly, and higher prices than those here quoted are charged for selected qualities of natural products even in bulk quantities.

42 Cannon Street, E.C.4, December 19

ON the approach of the Christmas vacation and the end of the year, industrial operations are, as usual, slowing down and there is little to be expected in the way of further business activity until the turn of the New Year. Meanwhile the Government are concentrating their efforts in the direction of the solution of the coal and labour problems, but it will be some time yet before anything tangible is achieved in that direction. The reduction in the Bank rate last week came much sooner than had been anticipated, but was the more welcome as it will help a little in the planning of schemes for the New Year. There is talk of considerable greater activity in the heavy industries, partly in connection with much increased requirements of the railway companies. The manufacturing trades in various directions may to that extent be benefited, and this would, in turn, react favourably on the commodity markets. Business has appreciably fallen off in the Mincing Lane produce markets, and next week there will be still less to report. Outstanding in the speculative markets is a further decline in pepper both on spot and for forward shipment. This particularly applies to white Muntok, and has caused a certain amount of apprehension in view of possible financial trouble arising out of the sharp decline which in the past two months amounts to about 1s. per lb. Shellac shows a decline of about 10s. per cwt. for usual standard TN orange, due partly to end of the year liquidations. Rubber was, on the whole, steady, with the London stocks showing a slight decrease after a heavy accumulation for many weeks past. In crude drugs, cascara sagrada is dearer, and more interest is shown at the higher prices. Chamomiles are also dearer, and it is predicted that much higher prices will be paid early next year. Business in pharmaceutical chemicals has now slackened off until the turn of the New Year. Morphine and salts have been advanced by makers and prices of codeine and salts (small lots) have been revised. Citric acid is a trifle weaker, and bromides are fairly steady. Among the industrial chemicals there are no changes of special interest; the acetate products continue in good demand; formaldehyde continues very competitive. Carbolic acid is firm and unchanged, and naphthalene is easier. Among the price changes in fixed oils is an easier feeling in acid oils, coconut and rape. Turpentine is easier on balance with an almost entire absence of business. In miscellaneous products, paraffin scale is dearer for shipment; lubricating oils are easier as regards filtered cylinders, and solvent naphthas are slightly cheaper. Methyl alcohol is very competitive and lower. Mercury was firm and in better demand for forward contracts.

Higher	Firmer	Easier	Lower
Cascara sagrada	Anise, star oil	Acid oils	Cajuput oil
Chamomiles	Cassia oil	Bergamot oil	Cloves (Zan.)
Codeine phosph. (small)	(c.i.f.)	Citric acid (foreign)	Gum acacia (c.i.f.)
Codeine, pure (small)	Cedarwood oil	Citrus oils	Maize starch
Morphine and salts		Coconut oil	powd. (Amer.)
Morph. diacetyl hyd.		Lemon oil	Methyl alcohol
Morph. ethyl hyd.		Lubricating oils (cyl.)	Pearl starch (Amer.)
Paraffin scale (c.i.f.)		Naphthalene	Pepper
		Naphthas	Rubber
		solvent	Shellac
		Rape oil	Valerian
		Wax, veget. (Jp.)	

Crude Drugs, etc.

AGAR AGAR is quiet, with No. 1 Kobe offering on the spot at 4s. 4d. per lb., and No. 2 at 4s.; Yokohama is 4s. To arrive, Kobe for January-February shipment is quoted at 3s. 8d. and Yokohama at 3s. 6d., c.i.f.

CADMIUM is steady to firm, and a fair demand is reported with spot quotations ranging up to 3s. 11d. to 4s. per lb. Recent arrivals have been fairly well absorbed.

CAMPHOR (REFINED) is steady, with sellers of Japanese 2½-lb. slabs at 2s. 7d. per lb. on the spot, and at 2s. 3d.

c.i.f. for January-March shipment; 4-oz. tablets are offered at 3s. 1d., and for flowers 2s. 7d. has been paid, with 2s. 8d. asked.

CARDAMOMS are steady: Ceylon-Mysore bold pale, 7s. 9d. to 7s. 11d.; medium, 5s. to 5s. 3d.; small to medium, 4s. to 4s. 3d.; smalls, 3s. 6d. to 3s. 9d. Alleppy are quoted at 3s. 3d., and December-January shipment at 3s. c.i.f.; Bombay seed is 5s. 4d. spot and December-January shipment 4s. 7d. c.i.f.

CASCARA SAGRADA is dearer. Quite a fair business has been done on the spot in old crop of various ages, with sales at 57s. 6d. to 65s. per cwt.; for 1924-25 p.cwt. 70s. to 72s. 6d. is asked, and for 1927-year-old 67s. 6d. to 70s. is wanted. Arrival prices are very firm and dearer, 58s. 6d. c.i.f. being quoted, and bids of slightly less have been refused.

CHAMOMILES are dearer, and practically all the cheap parcels, that is, quality other than so-called first pickings, have been cleared; and spot values of Belgian are now from about 250s. to 300s. per cwt. as to quality.

CLOVES are easier, with sales of Zanzibar on the spot at 10s. per lb. To arrive, October-December is quoted at 9½d. per lb. c.i.f., and January-March shipment at 9d. c.i.f. (buyers).

The landings of Zanzibar in London during the week ending December 14 were 500 and the deliveries 220, leaving a stock of 1,138, against 2,616 in 1928 and 9,422 bales in 1927. The landings of Zanzibar to date (January 1 to December 14) have been 8,603, against 14,482 in 1928, and the deliveries to date have been 9,842, against 19,551 in 1928. The landings of Madagascar to date have been 848, against 2,696 in 1928, and the deliveries to date 3,379, against 1,529 in 1928.

COCOA BUTTER.—Prime English is quoted at 1s. 2½d.; C.F.R. at 1s. 2½d., and Van Houten's A at 1s. 2½d. per lb. in not less than one-ton lots.

ERGOT is in rather more inquiry: Russian is quoted at 1s. to 1s. 1d. per lb. for medium to good sound; good bold sound Polish is 1s. 3d., and Spanish is 2s. 2d. per lb.

GALLS.—Chinese are firm, ordinary shape for January-February shipment offering at 58s. per cwt. c.i.f.

GINGER.—West African is quiet with spot sellers at 70s. per cwt.; to arrive, sales include January-February shipment at 51s. c.i.f.; sellers of February-April quote 50s. c.i.f.

GUM ACACIA.—At the lower range of prices the market is now steady, with more interest taken by foreign markets such as Spain, Brazil, etc. Kordofan cleaned on the spot is 11s.; natural sorts are unobtainable at the moment, but several small lots are close at hand. To arrive, closing prices for cleaned are 55s. c.i.f. for December-January shipment; 54s. for January-February, and 52s. 6d. for February-March; natural 2s. less. Bleached is unchanged at from 140s. to 160s. spot. Talha is 50s. spot; December-January shipment is 29s.; January-February, 28s.; and February-March 27s. 6d. c.i.f.

INSECT FLOWERS are in fair demand, good closed Dalmatian offering at 165s. per cwt. on the spot.

IPPECUANH. is, if anything, slightly easier, Matto Grosso offering at 16s. and Minas at 15s., with the possibility that slightly less would be accepted. An arrival of 85 packages has taken place from Uruguay.

MAGNESIUM.—There is a quiet steady trade doing with British makers, and quotations for small sheets and bars vary from 3s. 3d. up to 3s. 9d. per lb. according to specification. Ribbon sells at 11s. to 14s., wire at 7s. 6d. to 12s. 6d., and powder at 4s. 6d. up to 7s. 6d.

MENTHOL.—The market remains stagnant and no further interest is likely to be shown until the turn of the New Year. The spot value of Kobayashi-Suzuki is 18s. 6d. per lb., and January-March shipment is 14s. 9d. c.i.f.

MERCURY has been firmly maintained, although business on the spot for small lots has been more subdued; on the other hand, there has been some extension in the booking of orders for shipment. There is a fair quantity of controlled metal available on the spot, and the quotation is retained at £22 7s. 6d. net for at least ten bottles. Terms c.i.f. for shipment for not less than fifty bottles stand at £21 17s. 6d. net, plus cost of financing shipment. The f.o.b. price for forward shipments for large quantities of upward of fifty bottles net is £21 15s. per bottle. In the open market merchants and dealers are asking £23 to £23 2s. 6d. per bottle, less 3 per cent. discount. U.K. imports for last month were larger, amounting to 1,935 bottles, making a total for the eleven months of 6,820 bottles, which compares with 33,184 bottles for the same period last year. November re-exports were only 35 bottles, making an aggregate for eleven months of 4,617 bottles against 5,198 bottles for January-November last year.

OPUM.—The primary markets close firm, usual Turkey druggists' quality being quoted at 2s. 6d. per unit c.i.f. to arrive. Stocks in Constantinople have been reduced to about 841 cases against about 1,000 cases a year ago.

PEPPER is again lower. Singapore black is 1s. 0½d. spot. To arrive, October-December and January-March shipment has sellers at 11d. c.i.f. Lampung is 1s. 0½d. spot. To arrive, October-December shipment has been sold at 11½d. to 11½d. to 11d. c.i.f., and January-March at 11½d. to 11½d. to 11d. c.i.f. Tellicherry is 1s. 2½d. spot, and January-March shipment 11½s. c.i.f. Alleppey is 1s. 2d. spot, and 10½s. c.i.f. for January-March shipment. White Muntok has declined 1½d. per lb. to 1s. 5½d. spot. To arrive, October-December shipment has been sold at 1s. 4½d. to 1s. 5½d. to 1s. 3½d. c.i.f., and January-March shipment at 1s. 4½d. to 1s. 5½d. to 1s. 3½d.; March-May has sold at 1s. 2½d. c.i.f.

BLACK.—Landed in London last week, 13 tons; delivered, 92; stock, 1,211 tons, against 1,317 tons a year ago. WHITE.—Landed, 231 tons; delivered, 84; stock, 1,459 tons, against 186 tons a year ago.

PIMENTO is quiet at 10d. per lb. on the spot, and for December-January shipment 8½s. c.i.f. is quoted.

RUBBER is a fraction easier, but the market generally is quite steady. During the past week there has been a fair amount of spot buying and all grades have been in demand. America has also bought a certain quantity for prompt shipment from London. Arrivals last week totalled 1,710 tons, whilst deliveries were 1,961 tons, showing a decrease in the stocks of 251 tons. This is the first decline in the stocks for some months past. The London stock now stands at 53,180 tons against 17,669 tons at the corresponding period last year. The Liverpool stock now stands at 18,263 tons. Quotations (Wednesday, 5 p.m.): No. 1 standard ribbed smoked sheet, spot and December, 8d.; January-March, 8½d.; April-June, 8½d.; July-September, 8½d. per lb.

SARSAPARILLA is firm for genuine grey Jamaica, which is quoted at from 2s. 3d. to 2s. 6d. per lb. as to quality. Red native Jamaica is quoted at 1s. 7d., good part red 1s. 6d., and pale mixed colours 1s. 5d. Honduras roll is 2s. 2d. to 2s. 3d., and Mexican 10½d. per lb. on the spot.

SEEDS.—ANISE.—Spanish is 67s. 6d. and Russian 31s. per cwt. on the spot. CANARY is very dull; Mazagan on spot is 30s., and for shipment 27s. 6d. c.i.f.; Morocco f.a.q. (4 per cent.), 27s. spot and for forward shipment 24s. 9d. c.i.f. CUMIN.—Malta on spot is 70s., and for prompt shipment 60s. c.i.f.; Morocco is quiet at 65s. spot and 52s. 6d. c.i.f. for December-January shipment. FENUGREEK is unchanged at 20s. spot and 16s. 9d. c.i.f. for forward shipment. CORIANDER.—The price on spot remains at 9s. 9d. ex store. For December-January shipment business has been done at 7s. 4½d. c.i.f. FENNEL is quiet at 57s. 6d. on spot and 57s. c.i.f. for January shipment. MUSTARD.—Indian brown (4 per cent.) remains at 21s. c.i.f.; English is unchanged at 27s. 6d. to 31s. per cwt. according to quality. NIGER.—Bold Bombay (3 per cent.) is offering on sample at 15s. 9d. c.i.f. CARAWAY.—Dutch old crop is unchanged at 40s., and new crop, at 39s. per cwt. spot.

SENECA is quiet and unchanged at from 4s. to 4s. 1d. per lb. on the spot.

SHELLAC is lower, the spot price of usual standard TN orange having declined by about 10s. per cwt. to 155s.; fine orange is now 190s. to 280s., pure button 215s., and AC cakey 210s. Arrival prices have declined by about 8s. per cwt., sales including December-January shipment at 150s. to 143s. 6d. c.i.f. February-March shipment has been sold at 145s. to 146s. c.i.f. For delivery, the sales comprise December at 147s., to 140s., to 145s., March at 155s. to 143s. to 147s., May at 157s. to 143s. 6d. to 151s. 6d.

SQUILL is steady at from 24s. 6d. to 26s. per cwt. for fair to good white on the spot.

TAMARINDS.—Business has been done for forward shipment in Barbados description at about 32s. 6d. per cwt. c.i.f.; an average crop is expected. Small sales have been made at 65s. on the spot.

VALERIAN ROOT.—New crop Belgian is now coming forward and is available at from 62s. 6d. to 65s. per cwt.

WAX (VEGETABLE).—Japanese is easier at 80s. per cwt. on the spot, and for January-February shipment 70s. c.i.f. is quoted. Carnauba is quiet; fatty grey is 112s. 6d. spot; afloat, 108s. and 105s. c.i.f.; chalky on the spot is 112s. and 102s. c.i.f. Prime yellow is 160s. spot and 145s. c.i.f. Mediana is 150s. spot and 140s. c.i.f.

Essential Oils

BUSINESS continues slack. Anise is firm and no offers from the East have been made. Cajuput is slightly easier. Citrus oils are also easier. American peppermint is in no demand and Japanese is dull.

The following are the quantities and values of natural essential oils (other than turpentine) imported into and re-exported from Great Britain during November, 1929, compared

with the same month in 1927 and 1928 respectively, also for the ten months ending November in the respective years:—

		1927	1928	1929
November imports	.. lb.	434,312	354,057	403,174
	value	£108,815	£97,165	£96,505
Jan.-Nov. imports	.. lb.	3,592,659	3,988,344	3,608,858
	value	£1,016,182	£1,092,882	£1,227,744
November re-exports	lb.	59,907	56,323	59,975
	value	£20,810	£26,810	£25,780
Jan.-Nov. re-exports	lb.	703,256	710,960	778,787
	value	£278,478	£278,026	£339,439

ANISE (STAR).—Owing to the continued absence of offers from source of origin the spot price of leads is now 4s. per lb. Tins are quoted at 3s. 9d. spot. No drums are available.

BERGAMOT is rather easier at 12s. 6d. per lb. spot and 12s. per lb. c.i.f.

CAJUPUT is slightly cheaper and is offered at 2s. 9½d. per lb. spot.

CASSIA.—No business has been done here and 3s. 9d. per lb. c.i.f. is asked. Considerable business is reported to have been done with America from source.

CEDARWOOD is quoted at 1s. 3½d. per lb. spot in drums.

GINGERGRASS is quoted at 8s. 3d. per lb. spot and 7s. 9d. per lb. c.i.f.

LEMON is again easier, new crop Sicilian hand-pressed offering at 8s. 11d. per lb. c.i.f. and at 8s. 9d. per lb. for February-March shipment, and machine-made at from 7s. 9d. to 8s. 3d. c.i.f.

ORANGE.—New crop Sicilian sweet is quoted at 11s. 3d. per lb. c.i.f. and bitter at 11s. 6d. per lb. c.i.f.

PALMAROSA is quoted at 11s. 3d. per lb. spot and 10s. 9d. per lb. c.i.f.

PEPPERMINT.—Japanese dementhrolised is dull of sale at from 5s. 3d. to 5s. 6d. per lb. on the spot according to brand. Forward prices are nominal at 4s. 9d. per lb. c.i.f. American natural tin oil is in no demand, and is quoted at 14s. 6d. per lb. spot and at 14s. 3d. per lb. c.i.f. for shipment. Drums are quoted at from 13s. 9d. to 14s. per lb. c.i.f. H.G.H. is 20s. spot.

SASSAFRAS is quoted at 5s. 3d. to 5s. 6d. per lb. c.i.f.

SPERMINT is quoted at 20s. 6d. per lb. spot.

TANSY.—Tansy oil is quoted at 29s. per lb. on the spot.

WORMSEED (CHENOPODIUM) is quoted at 14s. 9d. per lb. spot and from 15s. 6d. to 15s. 9d. per lb. c.i.f. The lower spot quotation is due to the fact that stocks are fairly plentiful and were bought cheaply.

WORMWOOD is quoted at 73s. per lb. on the spot.

Pharmaceutical Chemicals, etc.

GENERALLY quiet markets are reported, and there is not likely to be any improvement this side of the New Year. Prices on spot are steady with one or two exceptions, such as citric acid. Morphine and salts have been advanced, and prices of cocaine and salts have been revised for small lots, the basic prices being unchanged.

ACETANILIDE continues to be quoted on spot at 1s. 4½d. to 1s. 6d. per lb. as to quantity, for B.P. crystals and powder.

AMIDOPYRIN is quiet and unchanged: spot, 10s. 7d. to 11s. 1d. per lb., as to quantity; f.o.b. Continent, ten cwt., 10s. 6d.; five cwt., 10s. 8d. per lb.

ASPIRIN continues quiet at from 2s. 9d. to 2s. 11d. per lb., as to quantity.

BARTONITE is steady, but there is not much business; five cwt., 7s. 3d.; two cwt., 7s. 6d.; up to 5s. per lb. for small lots.

BENZOIC ACID (B.P.) remains dull; quantities, ex works, 2s. 0½d. to 2s. 1d.; spot parcels, about 2s. 2d. per lb.

BROMIDES are fairly steady, although business is on the small side; price cutting is not so evident. Dealers' quote ammonium, 1s. 10d.; potassium, B.P. crystals, 1s. 6½d.; granular, 1s. 5½d.; sodium, B.P., about 1s. 9d., and slightly less for ton or more lots. British makers' list prices are unchanged; ammonium, 1s. 11d.; potassium, B.P. crystals, 1s. 6½d.; granular, 1s. 6½d.; sodium, B.P., about 1s. 9½d. per lb., in cwt. lots, with prices for large quantities about one penny less.

CALCIUM LACTATE is quiet but steady on spot at 1s. 2d. to 1s. 3½d. per lb., as to quantity.

CHLORAL HYDRATE (duty paid crystals) is very steady with home producers quoting 3s. 1d. to 3s. 3d. per lb., and some advance seems quite possible; Continental make to come forward is 3s. 6d. per lb.

CITRATES.—In further reference to the reduction in makers' prices of citrates announced last week (p. 721), we are informed that there has been no reduction in the price of ferri et ammon, citras virid, which remains at 3s. 3d. per lb. for 28-lb. lots.

CITRIC ACID (B.P. crystals).—The weakness recently commented upon is more evident; foreign on spot is offered down to 1s. 11d. per lb., less 5 per cent. for quantities;

British is also offering at 1s. 11d. per lb., less 5 per cent. from makers. Business is very restricted, and mostly a matter of negotiation.

CODEINE.—The makers' prices have been revised as from December 12, and are now as follows:—Codeine alkaloid cryst. and precipitated 24s. 5d. per oz.; 25 oz. assorted, 23s. 9d.; codeine hydrochloride and sulphate, 20s. 11d.; 25 oz., 20s. 6d.; codeine phosphate, 18s. 8d.; 25 oz., 17s. 9d.; 100 oz. and 250 oz. contracts are subject to the usual reduction. The basis prices for contracts are unaltered.

CREAM OF TARTAR has met with a slow and small business, but prices for foreign 99-100 per cent. powder are holding at about 102s. 6d. per cwt., less 2½ per cent.; British is unchanged at 104s. per cwt., less 2½ per cent.

CREOSOTE (B.P.) is unchanged at 1s. 8d. to 1s. 9d. per lb.

CREOSOTE CARBONATE remains slow of sale at about 5s. 8d. to 6s. per lb.

GUAIACOL CARBONATE is quiet but steady at 4s. 6d. to 4s. 10d. per lb., as to quantity.

HEXAMINE continues very steady although business is not of much account; controlled prices, 2s. 2½d. to 2s. 4d. per lb., as to quantity.

HYDROQUINONE is quoted at about 3s. 7d. to 3s. 11d. per lb., the lower price for large parcels.

METHYL SALICYLATE (B.P.) is meeting with some business with prices steady at 1s. 6d. to 1s. 8d. per lb., as to quantity.

METHYL SULPHONAL shows little business; quoted on spot from 12s. 7d. to 13s. 10d. per lb., as to quantity.

MORPHINE AND SALTS.—The makers' prices were advanced from December 12, and are now as follows:—Morphine alkaloid cryst. and precip. bromide, meconate and tartrate (neutral), 24s. 5d. per oz.; 25 oz. assorted, 23s. 9d. Morphine acetate, hydrochlor. powder and sulphate, 19s. 9d.; crystals, 3d. per oz. more; 25 oz., 19s. Morphine diacetyl, 25s. 5d.; 25 oz., 24s. 9d. Morphine diacetyl hydrochloride, 24s. 5d.; 25 oz., 23s. 9d.; morphine ethyl hydrochloride, 27s. 10d.; 25 oz., 26s. 9d.; 100 oz. and 250 oz. assorted contracts are subject to the usual reductions. The above prices show an advance of 1s. 6d. per oz. on the basis price of morphine hydrochloride and 2s. on small lots.

PARAFORMALDEHYDE is slow of sale with 100 per cent. powder in quantities at 1s. 7d. in kegs and 1s. 8d. for small parcels.

PARALDEHYDE is unchanged on a quiet market at from 1s. 1d. to 1s. 4d. per lb., as to quantity.

PHENACETIN continues steady on spot at the agreed prices of 3s. 2½d. to 3s. 5d. per lb., as to quantity; business is limited.

PHENAZONE is steadily maintained at the former prices of 5s. 9d. to 6s. 1d. per lb., as to quantity; business rather slow.

PHENOLPHTHALEIN is unchanged at the controlled prices of 6s. 11d. to 6s. 1½d. per lb., as to quantity.

POTASSIUM PERMANGANATE (B.P.) is steady with the usual small business at about 6d. per lb.; quantities, in drums, 5½d.

POTASSIUM SULPHOGUAIACOLATE remains slow of sale on spot at about 3s. 6d. per lb.

RESORCIN is steady, with powder at 2s. 11d. to 3s. 2d. per lb., and crystals, one penny more.

SALICYLIC ACID (B.P.) as quoted by homo makers' is unchanged at 1s. 5d. to 1s. 7d. per lb., as to quantity.

SALOL is steady on a quiet market; controlled prices, 3s. 7½d. to 3s. 10d. per lb., as to quantity.

SODIUM DIETHYLBARBITURATE remains dull on spot at 10s. per lb.; f.o.b. Continent, five cwt., 9s. 7½d.; smaller lots, up to 10s. per lb.

SULPHONAL is not in much demand, but the spot position is unchanged; quoted from 10s. 1d. to 11s. 2d. per lb., as to quantity; powder, 1½d. per lb. more.

TANNIC ACID (B.P. leviss.) is dull of sale; quantities, 2s. 9d.; smaller lots, up to 3s. 2d. per lb.

TARTARIC ACID (B.P. crystals).—The position here is difficult to define owing to lack of business; foreign on spot is held at about 1s. 3½d. per lb., less 5 per cent., for quantities. English is 1s. 3½d. per lb., less 5 per cent. In some respects the market is a little steadier than last week owing to the continued firmness of raw material.

THYMOL is unchanged on a slow market; synthetic, fine white, two cwt., 8s. 3d.; one cwt., 8s. 6d.; 56 lb. 9s.

VANILLIN continues competitive with cwt. lots ex clove oil at about 14s. per lb. and less for large quantities; ex guaiacol is offering at keen prices.

Industrial Chemicals, etc.

London, December 18.

MODERATE business continues in some products while the market continues generally steady. There is no point of special interest to comment upon. **ACETIC ACID** continues firm with a very good business passing; 80 per cent. tech-

nical, £36 15s.; 80 per cent. pure, £37 per ton, in barrels; glacial, pharmaceutical, 99-100 per cent., £66, in glass demijohns; glacial, in barrels, £56 per ton, ex store. **ACETONE**.

—Quite good business continues, with B.G.S. very steady at 476 10s. to £85 per ton, in drums, ex store. **ARSENIO** is dull, very few inquiries being reported for Cornish white powder 99 per cent., and quotations are about £15 15s. to £16 f.o.r. mines. **CAUSTIC SODA**.—Convention prices are now ruling the market for most business, which has been rather limited; 88-92 per cent. solid, spot, less than one ton, £34 10s.; one to five tons, £31; five to fifteen tons, £29 10s. per ton, in drums, ex store; c.i.f., 30s. per ton less in all cases. **COPPER SULPHATE**.—There has been some little inquiry for export, and the market is steady with the quotation of British Associated Makers at about £27 f.o.b. for casks. **U.K.** exports for November were 1,844 tons against 2,973 tons the same month last year, and the total for the eleven months is 38,986 tons against 45,426 tons for January-November last year. **FORMALDEHYDE** has been quieter of late, while the markets continue competitive; 40 per cent. by volume, about £34 per ton, in casks, ex store, slightly less for contracts. **POTASSIUM CHLORATE** is still very slow of sale, with quantities to arrive about 2½d. per lb., ex wharf; spot parcels, from 3d. per lb. **POTASSIUM PERMANGANATE** is meeting with little inquiry; commercial quality, in two-cwt. drums, 5d.; smaller lots, 5½d. per lb., ex store.

COAL TAR PRODUCTS.—Carbolic acid crystals continue firm and short in supply. Cresylic acid has been much quieter and is not so steady. Pitch continues to be quoted at the controlled price, with business quiet. **ANILINE OIL AND SALT** are unchanged. **BETANAPHTHOL** is steady at about 9½d. per lb., carriage paid. **CARBOLIC ACID** crystals (39° to 40° C.) are unchanged, with the home makers' prices for contracts for delivery next year at 7d. to 7½d. per lb. Spot parcels are offered from 1d. per lb., carriage paid, by dealers. Crude carbolic 60's is firm at 2s. 5d. to 2s. 7d. per gallon, naked at works. **CRESYLIC ACID** is quieter and not so steady: pale 97-99 per cent., 2s. 2d. to 2s. 4d.; refined, 2s. 3d. to 2s. 11d.; dark 95 per cent., 1s. 9d. to 1s. 11d. per gallon, naked at works. **NAPHTHELENE** is easier on a dull market; flakes and balls, £14 10s. to £15 per ton, in casks, ex wharf. **METHYL ALCOHOL** continues in fair demand, but the market is very competitive, and prices are easier at £42. per ton and less for quantities, in drums, ex store. **PYRIDINE**, **TOLUOL**, **XYLOL** and **PITCH** are unchanged.

Fixed Oils, etc.

ACID OILS are easier; coconut oils are dull and cheaper. Palm oils are dull and unchanged; linseed oil is slightly cheaper, closing steady, and American turpentine is easier. **ACID OILS.**—The market is dull and slightly easier: coconut and/or palm kernel, 32s.; ground nut, 29s.; soya, 27s. 9d. spot. **CASTOR** is unchanged and slow of sale; pharmaceutical, 49s.; first pressings, 44s.; second pressings, 41s. 6d. spot in barrels. **COCONUT** is easier and dull; deodorised, 41s.; Ceylon, 33s. 6d. c.i.f.; Cochin, nominal. **COTTON** quiet and unchanged; deodorised, 38s. 6d.; common edible, 36s. 6d.; soapmaking, 34s. 6d.; crude, 31s. 6d. spot. **GROUNDNUT** remains quiet; deodorised, spot, 42s.; crude Oriental, 37s. 6d. c.i.f. **PALM KERNEL** is unchanged on a slow market; deodorised, 40s. 9d.; crude, 34s. 6d. spot. **PALM.**—Values about balance on the week, but business has been poor; market closes steady. **Lagos**, 34s.; softs, 32s.; mediums, 32s. 3d.; hards, 33s. 9d.; bleached, 34s. 9d. spot. **RAPE** is dull and slightly easier; refined, 46s.; crude, 44s. 6d. spot. **SOYA** remains quiet; deodorised, 39s.; crude, 36s. 6d. spot. **LINSLED** (raw, naked).—Prices for all positions are slightly cheaper on the week, but the market is inclined to be firmer, especially forward. On spot, 45s.; December, 41s. 1½d.; January, 40s. 9d.; January-April, 39s. 9d.; May-August, 37s. 9d.. Boiled oil, spot, 48s. 6d. **TURPENTINE** is easier, London spot closing at 42s. 3d.; January-April, 43s. 3d. Deliveries for last week were satisfactory, amounting to 1,993 barrels, which makes a total since January 1 of 95,092 barrels against 99,833 barrels for the same period last year. Stocks were returned at 33,643 barrels, comparing with 31,156 barrels a year ago. Including the large quantities in the course of landing, the London visible supply made up at 34,404 barrels which compares with 37,856 barrels a year previous. **RESIN**.—There has been some little interest shown, but not much improvement in the takings by consumers. Shippers, however, are reserved, due to reduced receipts from America. Terms for shipment from America stand as follows:—B/D, 17s. 1½d. to 17s. 4½d.; E 17s. 6d.; F/X, 17s. 10d.; M/N, 18s. to 18s. 4½d.; W/G, 19s. 3d.; and W/W, 20s. 4½d. Terms ex-wharf command about 9d. per cwt. more. French grades are still neglected, with W/W held for 18s. 9d. c.i.f. **WOOD.**—Hankow in barrels on spot is quiet at 72s.



Letters for this section should be written on one side of the paper only. Correspondents may adopt an assumed name for purposes of publication, but must in all cases furnish their real name and address to the Editor.

Price Protection

SIR,—Although I see the point which "Manacled" makes in his letter (*C. & D.*, December 7, p. 698) regarding the position of chemists under the present system of price protection (i.e., that it would appear that chemists only are compelled to respect the minimum prices whilst other traders can cut as they please), I do not agree that a free hand to join in the cutting campaign would improve the state of affairs. It must be remembered that the greater part of the average chemist's business is constituted by the sale of proprietary goods, whether medicinal, toilet or otherwise, and the removal of all minimum retail prices would hit us far harder than it would other dealers, who have in most cases taken up our lines to attract customers to their stores. If the P.A.T.A. price list were withdrawn "Manacled" would find that in the course of a few months, or even weeks, all these items would be cut to cost price or (as happened in years gone by) some of them below cost. But I do not agree that the chemist has lost his own proprietary business, at least not in all cases; there are still pharmacists who have a good local sale for their own preparations, developed and kept up by personal recommendation and local advertising, and there is also still a fair section of the public which prefers to buy drugs from the chemist, provided he keeps up the quality.

Faithfully yours,
BELTED (16/12).

SIR,—In your issue of December 14 (p. 723) there is a letter from Mr. J. Silberberg. Personally I support the P.A.T.A. every time. I have had just on forty years in the trade or profession of a chemist and druggist, and can well remember the cutting of all prices, retail, by the big stores. . . . Now, will Mr. Silberberg give me permission to open a retail shop near or next door to him? I will "cut" all chemists' lines, drugs, chemicals, toilets, and P.A.T.A. lines for a "lark." I will be supported by unlimited capital, because I am going for his "body." . . . He sells a line at 1s. 2d. (full price and recognised by the right-minded people in the trade as a fair price). I sell at 1s. 1d. He retaliates, reducing to 1s. I now go the whole "hog," again for a "lark," and come down to 6d. (say). I suppose then he would be a chemist no longer, but try wireless supplies (not now cut) and start cutting that business up. Sorry if I am a little blunt. Will Mr. S. be good enough to read the letter appearing on p. 723, under "Price Protection," signed "S. P." (10/12)? If, Sir, Mr. S. is not satisfied, let him come to Brixton and we will show him some of his cutters in another trade—retail confectionery—and see the result of cutting on what were non-cutters. . . . I will argue no more but get back to work, but not to cutting the chemists' P.A.T.A. lines; the profit, as we all know, is not too large as they now stand, but is better than no profit at all. The manufacturers must support their own price and the P.A.T.A., or else they must not expect the support of the retailer.—Sincerely yours,

TOM EVERY (17/12).

SIR,—Your correspondent "S. P." seems very content to take what he can get at regulated prices and let the rest go, and simply rely upon an organisation to help him which has failed largely in its purpose after thirty-eight years' work; in the light of this fact, does he seriously suggest that other chemists should do as he does? And give their support which is actually driving his business into the hands of outside traders? If he had only an average gross profit of a halfpenny on 1s. 1½d. articles, he was then compelled to push his own manufacture, which goes to prove that even

largely advertised articles could not get a market to the same extent as to-day. I have always maintained prices, P.A.T.A. or otherwise, but I feel it is time I changed my policy unless the sale of patent medicines is confined to chemists—the legitimate distributors. It is not necessary, as "Inciso" suggests, entirely to cease to stock cut lines. We can keep a limited quantity at a small capital outlay to supply "obstinate" customers; his letter is written by one who thinks. If the channels of supply were regulated many difficulties would fade away, as Mr. J. Silberberg suggests. Unless manufacturers and the P.A.T.A. get busy quickly, the individual chemist must act independently or get out.

Yours faithfully,
MANACLED (18/12).

SIR,—In reference to the correspondence about price protection it is high time it were realised that the policy of the P.A.T.A. is increasing for us competition, also creating powerful vested interests imincinal to us. No one will deny that the P.A.T.A. has benefited us greatly in the first years of its existence; but since the slump in trade started, adherence to protected prices has encouraged and made it lucrative for unscrupulous adventurers to create a network of cutters' shops. Also many shopkeepers have begun selling proprietaries who never touched this business at all. The evil is growing rapidly and invading all localities. It cannot but drain seriously chemists' business. The trade in proprietaries forms on the average a third of our business, usually less; and for the sake of unobtainable profits on this portion of our trade we sacrifice much other business, which is going to undesirable competitors. Large firms spend thousands in advertising to attract the public; is not the business in proprietaries, even at a low profit, worth having in these days for the sake of the customers it brings, who are potential purchasers of our other commodities? I have been a subscriber to the P.A.T.A. since its very inception, and have been in business years before then; and I can say that chemists need not fear to revert to the old state of business in patents, especially as it is now becoming clear that the P.A.T.A. has failed to enforce its policy and, in fact, cannot do it. The P.A.T.A. exists now by force of inertia; its disappearance would disappoint the cutters, who would then lose their living.—Yours truly,

ANOTHER MANACLED (17/12).

The Amount of a Fee

SIR,—I note in the new N.H.I. Formulary that linctus diamorph. has an asterisk, denoting a reduced dispensing fee. Surely a 5d. dispensing fee is small enough considering the liabilities attending D.D.A. drugs. I contend that P.D.A. drugs should have a larger fee than 5d. How would it be for chemists in a body, through the Pharmaceutical Society or R.P.U., to refuse to handle D.D.A. drugs until such time as the regulations are modified and the Home Office stops treating the chemists as criminals?—Yours truly,

W. A. STURDY.
Manchester.

Multiple Inspection

SIR,—It would be an advantage to the trade if the R.P.U. would go into the matter of the powers of the police. All sorts come into my shop and waste time. . . . Must one see these people? Must they produce credentials? Have they any right to see the poison-book or question assistants? Have they any right in the shop at all? These are interesting questions. Recently an ordinary "copper" told me that my shop was a "public place," and that he had a "right" to conduct his inquiries there. Some time ago I gave information to the police, and was rewarded by an attempt on their part to prove a breach of the poison law on my part. In these days of complex regulations . . . we are all likely to be criminals without knowing it, and if the police attack their friends it is, in my opinion, time that we learned to shut our mouths.

Yours faithfully,
London, S.E.1. DOUGLAS CARNALL.

International Esperanto Congress

SIR.—As your reader believes (*C. & D.*, December 14, p. 724), there has been proposed an International Corresponding Esperanto Circle of Pharmacists. The circle for England, under the name of F.S.B.E. (Farmacia Sekcio de Britaj Esperantistoj), is already in existence, and I shall be pleased to forward, to any of your readers, literature about it and about Esperanto, if they will apply to me at 4 Richmond Road, Wanstead, London, E.11. (As there are two Richmond Roads in the E.11 postal district, it is necessary to give the full postal address.)—Yours truly,

F. B. ELWELL.

London, E.2.

Panel Servitude

SIR.—The letter of Mr. M. Goodman on "Panel Servitude" (*C. & D.*, November 23, p. 636) is very pithy and goes straight to the point, for there is on the face of it no reason why the comparatively small amount of money required to balance the drug fund cannot be provided when such large sums can be voted for other and newer purposes. After all, we are not asking for a bonus or *ex-gratia* payment, but only for our just dues. But apart from the discounting of our accounts, there are many other minor expenses which crop up which are never shown in these figures and which chemists have to pay straight from their own pockets, especially at the present time when we are feeling the effects of the change over to the National Insurance Formulary. Many doctors have not yet become acquainted with the new formulas, and so we are daily confronted with prescriptions which do not exactly comply with the requirements. On one occasion recently I had to telephone to a doctor who had two surgeries; he was not at the first one, so that meant another call to the second, and afterwards despatching a messenger to get the alteration made and initialed. None of these expenses is allowed by the Pricing Bureau. Then, leaving out the question of proprietaries, there is the expense and inconvenience caused by the prescribing of some rarely used drug, of which only a few grains are required to dispense the product; one cannot well order less than half a ounce from the wholesaler, and the balance is dead stock. The same argument applies to many unusual tablets or capsules. If a proper analysis could be made of items such as those I have enumerated, it would be found that the presumed profit was eaten up in many ways, and it will continue to be so as long as we work on a so-called "commercial" tariff which allows no margin for incidental losses.—Faithfully yours,

TARIFATE (3/12).

The Chemists' Title

SIR.—A question asked at the December meeting of the Pharmaceutical Society's Council resuscitates the subject of the description "pharmaceutical chemist" for all who pass the Qualifying examination. The use of this title should be acceptable to those who dispute our undoubtedly right to the name "chemist" on ethical grounds. The Ph.C. will in time be supplanted by the B. Pharm., and it would be better to retain Ph.C. for chemists and druggists than its unseemly contraction of pharmacist. Some advertisements which have appeared of late, in which the services of pharmacy to the nation have been extolled, seem to advocate the M.P.S. title, and to suppress the noticeable use of the word "chemist." The policy which directs advertisements on these lines is somewhat doubtful, as eventually it may be used as a lever by those bodies who wish to pilfer our original title from us for their own benefit.—Yours faithfully,

ARKAY (14/12).

SIR.—With reference to the note by "Xrayser III" in THE CHEMIST AND DRUGGIST of December 7, I am pleased to see that Mr. Antcliffe explains his attitude. It almost appeared that the Council were in league with those who deprive us of the title. The income-tax authorities also now describe us as "pharmacists." I am convinced that the title is in more danger from the Institute of Chemistry than from the unqualified, for the Institute have coveted our title for years and seek to restrict it to themselves—a thing the chemists have never done. Hence we need to be particularly alert when the whole business

goes into the melting-pot, and our representatives should be told in no uncertain voice what the views of the majority of chemists are.—I am, etc.,

ANTEBELLUM (18/12).

A Cause of Offence

SIR.—I am glad to see that Mr. Humphrey draws attention to the annoyance caused to chemists by the remarks of some Insurance practitioners to their patients regarding the conditions of panel service and the administration of the drug fund (*C. & D.*, December 7, p. 698). This attitude is not confined to Middlesex. The sort of thing which annoys chemists particularly is when a script is received which orders something obviously not allowable, or written in such a way that it cannot be properly dispensed, and the customer comes back with the information that the doctor says "the chemist does not know what he is talking about, he has to do what I say, not what he thinks." It is useless for the chemist to try to enter into an explanation of technical regulations with a customer who does not understand them, and who therefore goes away with the erroneous impression that the chemist is in the wrong. What would a doctor say if the chemist sent back one of the hopeless prescriptions he is sometimes presented with, after remarking to the customer that evidently the doctor does not know how to write one? Mr. Humphrey also refers to the method of deciding whether any particular article is allowable for payment and the right of the chemist to appeal to the Minister of Health if payment is refused. I should like to know whether the chemist is advised every time an article is disallowed; because sometimes, when an article is on the border-line and it is supplied, there is an uneasy feeling that it may not be paid for and nothing more be heard of it. If such is the case one never knows what amounts may be lost, and it must be remembered that the chemist is in a very difficult position when he is faced with the order of a doctor that a certain article must be supplied.

Yours truly,

ADVISANDUM (17/12).

Subscribers' Symposium

For interchange of opinion among "C. & D." readers and brief notes on business and practical topics.

Dispensing Prices in the Surgery

A customer received a prescription from a specialist for thyroid tablets, gr. 5, one once a day. The doctor told her that chemists were not allowed by law to supply these, and the only place she could get them was his surgery. She goes there every week, receives seven tablets, and pays 3s. 6d. for them.—F. H. Q. (9/12).

Another "First"

On reading our account of the last Preliminary examination held by the Pharmaceutical Society of Great Britain, a subscriber (26/11) forwarded us a set of Preliminary examination papers dated October 5, 1880. The papers are printed with sequential numbers on one side of a sheet of paper measuring 8 inches by 10 inches. The Latin is based on Caesar only (four questions), and the arithmetic and English comprise five questions each. Unlike the arithmetic paper of 1900, that of 1880 takes no notice of the metric system.

Future of Pharmacy

I am not very hopeful that there will be any great advance, as suggested by Professor Dixon, regarding the employment of pharmacists in other branches of the curative art, at any rate not for years to come and until there has been a considerable change of attitude among the doctors. The medical profession is such a close one that every available position is reserved wherever possible for a medical man. Trained opticians are looked at askance, bacteriological work is carried out by medical men, and analytical and microscopical means of diagnosis are done in laboratories and clinics in the hands of doctors. Unless the pharmacist is going to content himself with inferior positions in which he does the routine tests or minor details now carried out by unqualified assistants or workers, I am afraid that these openings will not materialise to any extent.—*Bactero* (16/12).

Dispensing Notes and Difficulties

A Sulphur-Calamine Lotion

Mr. John Hogg, Bonnington, Edinburgh, referring to the directions for mixing the lotion containing precipitated sulphur, calamine, zinc oxide, glycerin, lime water and water printed in the *C. & D.* of November 16 (p. 602), writes:—"A much better lotion is made by rubbing up the powders with water in the first place (not glycerin), triturating well and adding the glycerin last or any time except with the dry powders. You will find by this method the powder is much better diffused throughout and takes much longer to settle."

A Presentable Preparation

SIR,—Could you tell me how to make a satisfactory preparation of the following:—

Sod. glycerophosph.	...	gr. LXXX.
Hyoscine hydrobrom.	...	gr. 2/15
Acid. acetylsal.	...	gr. c.
Aq. chlorof.	...	ad 5x.

Yours faithfully,
BUD (11/11).

[Dissolve the sodium glycerophosphate and hyoscine hydrobromide in two ounces of the water. Rub down the acetylsalicylic acid to a fine powder in a mortar, add 5iss. of pulv. tragacanth. co. and mix gradually with the remainder of the water. Finally mix together in the bottle.]

Miscellaneous Inquiries

When samples are sent particulars should be supplied to us as to their origin, what they are, what they are used for and how. We do not undertake to analyse and report upon proprietary articles nor to publish supposed formulas for them.

E. D. R. (19/11).—RESTORING FADED INK.—The solution to which your customer refers is ammonium hydrosulphide. See *B.P.*, p. 474.

J. C. (30/10).—COLLOIDAL SULPHUR.—This is a thick syrupy liquid, opaque with what in appearance is precipitated sulphur. It contains 42 per cent. solids, which dry down quite hard; it reduces Fehling's solution rapidly as if glucose were present. It yields no ash. The sulphur was not determined, but a preparation, apparently similar, would be obtained by incorporating 2 per cent. of pure precipitated sulphur with a 40 per cent. (by weight) pure dextrose solution.

A. E. (10/12).—EMPL. GRATIA DEI.—The following formula is given by *Van Mons* (1821), and in the *Pharmacopée Universelle* :—

Yellow wax,		
Resin	...	of each 9 parts
Melt together, add:		
Turpentine	...	5 parts
Then, when the mass is becoming solidified,		
Powdered obianum	...	3 parts

According to the *Sydenham Lexicon*, verdigris was sometimes added. The *O.E.D.* has a reference to a plaster of this name, with similar ingredients, dated 1669.

F. G. F. (11/12).—ORIGIN OF CARBOYS.—The word "carboy" has not been traced back further than the year 1753. Large carboys have been made only in the last half century or so, for the technical reason that the older ones were formed by blowing out a lump of molten glass; by means of the lungs of the blower, a fact which obviously limited the maximum size. With the introduction of blowing apparatus, larger carboys became a possibility. Some old prints of chemists' shops show rows of carboy-like bottles in the otherwise plain windows, and it is not improbable that the idea of using coloured liquids and gilt decorations arose as an afterthought.

N. B. (5/12).—ETCHING STEEL.—Nitric acid or glacial acetic acid should answer your purpose.

A. H. (17/12).—COCKROACH POISON.—See *C. & D.*, 1929, I, 670.

Legal Queries

H. W. (20/11).—The fact that the liniment is held out as beneficial in certain specified ailments, e.g., colds, neuralgia, rheumatism, sciatica, lumbago, gout, etc., renders the article liable to medicine-stamp duty.

Copyright (5/812) has written an ode and set it to music. How should he proceed in order to secure copyright in the words and tune? [He need not do anything. By virtue of the Copyright Act, 1911, the copyright vests in him automatically as author.]

W. C. (4/12).—Recently, the tenant of a "controlled" house gave his landlord a month's notice terminating the tenancy and at the end of that time moved elsewhere. The landlord refuses to accept the keys and insists that the tenant is liable for six months' rent. He offers, however, to release the tenant if he pays part of the cost of re-decorating the premises. How does the tenant stand? [Since we do not know the terms of the tenancy we cannot say whether a month's notice was sufficient; but if, as is possible, it was a yearly tenancy, the tenant was bound to give six months' notice expiring upon an anniversary of the date of the commencement of the tenancy. In that case, he will be well advised to compromise with the landlord.]

C. A. A. (26/11) was engaged by a chemist as an assistant about two months ago. His employer has just sent him by hand a letter stating that the engagement will be terminable by a week's notice on either side. No mention was made at the time of the engagement of the matter of its termination; but "C. A. A." understands that the custom is to give a month's notice. How does he stand in view of the letter? [The custom is that a chemist's assistant is entitled to a month's notice in the absence of a special agreement to the contrary. We do not think that the new condition of service mentioned in the letter is binding upon "C. A. A." unless he expressly accepts it, or from the circumstances a fresh agreement subject to that agreement can be inferred.]

G. H. T. (3/12) is manager of a branch business in a small town owned by a company in the Midlands. When he was engaged he undertook not to be concerned in a competitive business within a radius of three miles of the shop after leaving the company's service. Is such an agreement binding, and is it put an end to by reason of the fact that the name of the company has been changed? [A radius agreement of this kind is valid provided that it is not wider than is reasonably necessary for the protection of the person for whose benefit it operates. In the case in question the restriction would not appear to be unreasonably wide. We should imagine that the change of name would not affect the validity of the agreement; but in the absence of a more complete knowledge of the circumstances it is impossible to express a definite opinion.]

Retrospect of Fifty Years Ago

Reprinted from
"The Chemist and Druggist," December 15, 1879

Preparation of the British Pharmacopœia

Mr. Hampson moved [at the Council meeting of the Pharmaceutical Society] that the General Medical Council should be asked to receive a deputation to urge upon them the desirability of the Pharmaceutical Council being legally empowered to nominate pharmacists to co-operate in framing and amending new editions of the British Pharmacopœia. He said that such a representation was made by the Pharmaceutical Council to the General Medical Council in 1874, but he believed it had not been acknowledged. It was true that the Medical Council had employed Professor Redwood and another practical pharmacist, and these gentlemen had rendered great service, but they had no recognised status. . . . In no other civilised country did pharmacists occupy such an undignified position. . . . The president said there was only one feeling as to the abstract right, but he considered that, as a question of policy, the motion was not wise, as it might expose the Council to a rebuff and convert the Medical Council into antagonists. . . . The motion was . . . lost.



[Commenced C. & D., July 5, 1924]

Santonica and Santonin, Commerce (continued).

Some of the remarkable fluctuations in the prices of santonin are given below:—In 1908 the market price was about £1 per kilo; in 1909 and 1910 the official prices were about £3 10s. to £4 per kilo; in 1911 they ranged from £4 to £6 10s., and in 1912 up to £5 10s.; in 1913-14 they were from £11 to £12, and in 1915 about £15. During 1916-17 they were between £15 and £20; in 1918, £21, and in July 1919 £25 was quoted, and from September 1919 to January 1920 the price was £50; in February 1920 £60, in March, £65, in April, £75, and in May, £80. Between June and October of that year the price fluctuated between £70 and £80, and in November 1920, the price was reduced to £43 per kilo, at which figure the market remained until February 1921. Between March and October 1921 prices varied between £50 and £65, and in November they were again at £80. They remained at this figure until 1923 when they were gradually reduced to £52 10s. per kilo for bulk quantities. It is very difficult to say what the annual consumption of santonin is in any one country, but it would convey a better meaning if the approximate sales and exports from Russia were indicated over a series of years. The position has been complicated by large stocks which were lost or destroyed in Russia itself and other stocks which accumulated in various countries, and also by sequestrations by the German Government at the outbreak of war, these being considered enemy property. Those hidden stocks were subsequently released after the war. According to records of the Santonin Factory in Turkestan, the exports from the factory (there are no records of exports from Russia itself) in 1910 were over 11,000 kilos; in 1911 over 9,000 kilos; in 1912 about 6,000 kilos; in 1913 over 9,000 kilos; in 1914 about 4,000 kilos; 1915 about 5,000 kilos; 1916, 5,000 kilos; 1917, over 8,000 kilos; 1918, 5,000 kilos; sales in 1919 were over 3,000 kilos; in 1920, about 2,000 kilos; 1921-22, about 1,000 kilos. During these two latter years and the beginning of 1923 the then Soviet agents also sold over 5,000 kilos. There was a lapse of several months in 1923 between the change of agencies with no first-hand santonin on the market, so that when the contract was acquired by the Eastern and Russian Trading Co. in June 1923 (after eight months of negotiations) they had by the end of the year sold about 2,500 kilos; in 1924 the agents sold over 3,600 kilos; in 1925 over 4,000 kilos; and in 1926 over 5,200 kilos, to be followed by about 5,000 kilos in 1927.

POSSIBLE SOURCES OF SANTONIN.—The ruling high price of santonin naturally led to inquiries concerning other possible sources of santonin amongst the numerous species of santonica, especially those of the Seriphidium section, to which *Artemisia maritima* belongs. But only five of them have been proved to yield santonin. These are *A. brevifolia*, Wall., *A. fragrans*, Willd., *A. Lercheana*, Karel et Kiril, *A. pauciflora*, Stechm., and *A. gallica*, Willd. In the United States of America fifty-six species of *Artemisia* were examined in 1923 by A. Vichoever and Ruth G. Cape, of the Pharmacognosy Laboratory of the Bureau of Chemistry of the United States Department of Agriculture, who reported that santonin can be obtained from the flowerheads of *A. mexicana*, Willd., *A. neomexicana*, Wooton, and probably from *A. Wrightii*, Asa Gray, all of which grow in the regions of Mexico and New Mexico. The form of the crystals obtained from the last-named species leave it in doubt whether the santonin obtained is the normal form of that body. The specimens

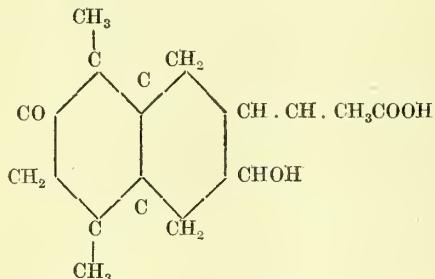
examined could not all be obtained in the early flowering stages when, as a rule, the highest percentage of santonin is likely to be present, so that it is difficult to say whether any given species normally yields it or not. Other difficulties that present themselves are the conditions under which the plants grow, viz., the altitude, up to 2,000 feet in the case of *A. Cina* or the sea level in some forms of *A. maritima*; the character of the soil, whether clayey or sandy, and the degree of saltiness and the temperature in winter. *Artemisia caeruleascens*, a native of the Mediterranean region, has been found by Herndlhofer by microscopic chemical assay to contain santonin in the flowers. Aufrecht has recently had occasion to analyse several specimens of santonica collected along the banks of the Volga in the vicinity of Sarepta. He found that it contained 1.6 per cent. of santonin as well as 0.37 per cent. of lecithin and 0.42 per cent. of betain. It is evident, therefore, that santonin can be obtained nearer than Turkestan, and that the other two species known to yield it in the neighbourhood of Sarepta can still be obtained from there. In this country a new source of santonin in *Artemisia brevifolia* was pointed out by Prof. Greenish ("Year-Book Pharmacy," 1921, p. 142). It had been under investigation at the Forest Research Institute at Dehra Dun, and Mr. J. F. Simonsen recorded a specimen collected in July 1920 and August 1921 as yielding from the herb, without stems or flowerheads, one per cent. of santonin. He also shows the variations during different months during 1920 and 1921, the average being 0.4 to 0.6 per cent. during July and August. It grows more or less mixed with *A. sacrorum* at a height of 7,000 to 9,000 feet in Cashmir and Kunan and from 9,000 to 11,000 feet in Thibet, *A. brevifolia*, which is more markedly drought-resistant, being dominant on ridges, and *A. sacrorum* in the hollows. The variations in the yield appear to be due to climatic conditions prevailing during the year, and the development of the plant, but Mr. Simonsen believes that the percentage present in the leaves is sufficient to warrant commercial extraction and that santonin could be manufactured in India in sufficient quantity to supply her own requirements and leave a surplus for export. A syndicate for this purpose was formed in India in 1922 ("Year-Book of Pharmacy," 1924, p. 268).

CULTIVATION.—Attempts have been made to cultivate the santonica plant in the United States from seeds received from California, which was referred to *A. Cina* by the Bureau of Plant Industry in Washington. Some of these seeds were sent to Holland, and cultivated there in 1923 by Professor Van der Wielen in the Botanical Gardens at Amsterdam. The plants were found to contain in the leaves and flowerheads 1.3 per cent. of santonin, as determined by Dr. E. J. Van Itallie. It evidently belongs to the Seriphidium division of the genus *Artemisia*, but the plant when examined by Wallis and Mowatt was found to possess characters distinct from those of *A. Cina*, Berg. The venation of the leaves shows a much more frequent branching of the veinlets than in *A. Cina*, the ultimate branches frequently ending blindly in the areas outlined by the other veinlets. The midrib of the bracts is narrow and nearly straight and very rarely branches. The apices of the bracts differ from all others examined, in having two or three small crenations at the extremity, but apical hairs are never present. The flowers also are quite characteristic. The apex of each triangular lobe of the corolla is covered by numerous short papillae, from among which arises a single unicellular hair, which is about equal to the length of the corolla lobe. Although distinct from *A. Cina*, there seems a possibility of cultivating it in Holland as a source of santonin, as it has passed successfully through the frosts of winter. Professor Van der Wielen found that the amount of santonin varies under cultivation according to the season; gathered in May it contained only 0.151 per cent. A species of *Artemisia* is grown now at Koenigsee in Thuringia, for the Soteria Chemical Works, which yields santonin having a melting point of 170° C. With respect to possibilities of cultivation, it must not be forgotten that *A. Cina* is difficult to grow. The other species known to have been used for the production of santonin, viz., *A. maritima* var. *Stechmanniana*, Bess., and *A. pauciflora*, Weber, might be worth trying in any of our colonies where the conditions resemble those of the salt marshes near the mouths

The C&D Commercial Compendium

of the Don and Volga, such as the marshy districts near the mouths of the large rivers of Africa, or even in the neighbourhood of the Dead Sea in Palestine. Seeds of these species could probably be more easily got through botanical gardens or horticultural seedsmen than through merchants.

Santonin Acid.—This is an unstable acid having the formula



Its lactone is santonin, to which it readily reverts on standing in contact with a mineral acid, or on warming to 120°. It can be obtained by treating santonin with alkalis, adding excess of hydrochloric acid to the solution and immediately shaking out with chloroform. The acid has been given internally in the form of its sodium or calcium salts. Sodium santoninate is soluble in water and is, therefore, liable to produce symptoms of poisoning, even in small doses. One authority gives the maximum safe dose as one-tenth grain, which is useless as a vermicide, but has been used to relieve the lightning pains of tabes dorsalis. Calcium santoninate is insoluble, and is used similarly to santonin.

Sapindus.—The fruits of various species of this genus (Nat. ord. Sapindaceæ), chiefly consisting of small trees, are known in commerce under the name of soap nuts or soap berries, and are widely used as a substitute for soap in the tropical and sub-tropical countries where they grow. The fruits are nearly globular, blackish, usually wrinkled, and viscid or sticky inside the pericarp, being more or less translucent and containing a single hard seed about the size of a pea, with a well-marked hilum on one side. In North India the species used is *S. Mukorossi*, Gaertn., but in Central, West and South India *S. trifoliatus*, Linn. (*S. laurifolius*, Vahl.) is the species used. The usual native name applied to soap nuts in India is "Ritha." *S. Mukorossi*, Gaertn., is exported annually from the Forest Division of Kumaon, coming into the market in January and February. The crop of *S. trifoliatus*, Linn., is offered in the markets of India in March and April. The fruits are largely used by the natives as a substitute for soap, especially for woollen and silk materials. For Cashmere shawls the fruits of *S. Mukorossi* are used. The fruits are also employed by Indian jewellers to brighten tarnished silver. Those of *S. trifoliatus*, Linn., are said to be also used to wash and bleach cardamoms and to improve the flavour as well as the colour of the spice. (See "Pharmacographia Indica," I, pp. 367-370.) The market value is estimated by Dymock at about 2½-3 rupees per pharal of 35 lb. The fruit of *S. Mukorossi* can be recognised by the tomentose hilum of the seed and by the two shallow divergent fissures on the upper part of the dorsal side of the seed. The pulp has a sweetish taste at first and then is very bitter. The fruits of *S. trifoliatus*, Linn., are used as an expectorant in asthma, and in Bombay as an anthelmintic in four-grain doses. Many other medicinal uses in India are mentioned in Dymock's "Materia Medica," W. India (second ed., p. 189). The fruits of *S. trifoliatus*, Linn. (*Sapindus emarginatus*, Vahl) were examined by J. C. Umney, who reported that they consisted of 54 parts of pericarp and 46 parts of seeds. The pericarp contained 41.9 per cent. of saponin, which is neutral to litmus and decidedly poisonous. It is soluble in water and gives no precipitate with acid nor with neutral or basic solution of lead acetate. The seeds are exceedingly hard and bullet-shaped and are used for rosaries, bracelets, necklaces, etc.,

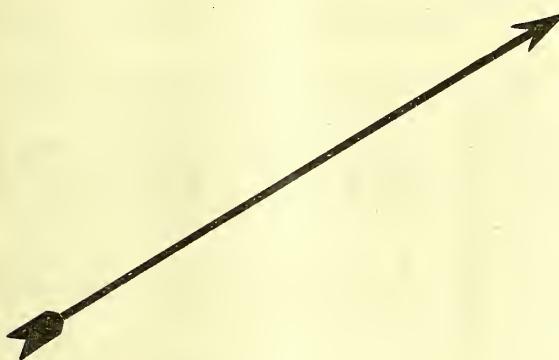
and although the seeds are poisonous in some species, such as *S. esculentus* and *S. Senegalensis*, the pericarp is eatable. *Sapindus Rarak*, D.C. (*Dittelastra Rarak*, Hook f.), a native of Malaya and Southern China, was examined by Dr. O. B. May and found to contain an amorphous colloid substance, optically inactive, but very soluble in water, sparingly soluble in alcohol and acetone, and insoluble in chloroform and benzol, one part in one thousand parts of water producing a frothy solution, even with salt water. Used as a lotion in skin disease they are said to be beneficial, but when eaten produce giddiness. The fruits of *Sapindus utilis* are said to be specially useful for insecticidal sprays, even the powdered fruit may be used ("Compt. Rend.," 1911, pp. 152, 553). Other species are used in North and South America and the West Indies, e.g., *S. Saponaria*, Linn., and *S. inequalis* D.C. (*S. marginatus*, Willd.). The fruits of *S. emarginatus*, Vahl., are used in North America as an expectorant. *S. Saponaria*, Linn., yields fruits that are known as Savonier in the Antilles, which are used as a substitute for soap, and the bark of the tree is used as a febrifuge. In Guiana, *S. arborea*, Aubl., is used, and in the Mascarene Islands *S. rigida*, Poir.

Sapodilla Gum.—See Chicle.

Saponaria.—See Soapwort.

Saponification Value.—Strictly speaking, "saponification" means conversion into soap. When a fatty oil is decomposed by a caustic alkali, glycerol is liberated, and the fatty acids combine with the alkali. The alkaline salts of these fatty acids are what is known as soap—hard soap in the case of the sodium compounds and soft soap in the case of the potash salts. It is only to those fatty acid salts which have a detergent value that the name soap is applied commercially. The salts of the lower fatty acids, such as sodium acetate, are never termed soaps. As the process of saponification is a quantitative reaction easily measurable, it has been found useful as a method of analysis. Obviously the amount of alkali necessary to saponify a given weight of an oil will vary according to the character of the fatty acids present; and as an oil such as coconut oil contains a considerable amount of fatty acids of lower molecular weight than those in, say, olive oil, the former will require more alkali for saponification than the latter. The term "saponification value" means, empirically, the number of milligrams of potassium hydroxide necessary to saponify one gram of the oil. In the majority of fatty oils this averages about 180-190, but in certain cases is as low as about 170, or as high as 235 or so. The term "saponification value" is often shortened to S.V., and is an official test for fatty oils in the British Pharmacopœia. In the case of essential oils the term "ester value" is used instead of "saponification value," and again represents the number of milligrams of potassium hydroxide necessary to react with the esters present in the oil. Conventionally, however, the esters are usually calculated in terms of the principal ester present in the given oil, e.g., linyl acetate in bergamot and lavender oils, and geranyl tiglate in geranium oil. There is a tendency to value essential oils containing much ester on the basis of ester percentage. This method of valuation is undoubtedly correct in many cases, where the ester is an absolutely dominant constituent of the oil. It must, however, be remembered that in some cases a lower ester content is counterbalanced by a higher content of other odorous substances. The ester value is an official method of testing, where suitable, for the essential oils of the British Pharmacopœia. The above must be taken with the qualification that the term "saponification value" really includes (a) the free acid value and (b) the ester value. In the case of essential oils the amount of free acids is small and usually negligible, and the trace of free acids is calculated in with the esters. In the case of fatty oils the amount of free acids is often high, and the acid value, although included in the saponification value, is usually also determined separately. The ester value is often shortened in tables and reports to E.V.

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TRADE **"FELLOWS"** MARK

Compound Syrup of Hypophosphites "FELLOWS," in addition to being in constant and increasing demand, adds distinction to a chemist's show window. It is a symbol of progressiveness and reliability.

Tablets Laxative "FELLOWS"

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IN TWO SIZES, NAMELY:

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The GREAT remedy for
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Beecham's Powders are an excellent line to stock—a line that repays any selling co-operation extended to them
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Boxes **3/4**

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Sole Distributors: Proprietors of Nonn Ltd.
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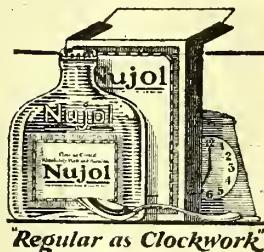


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have a national reputation—constantly increasing sales during the last 25 years prove their merit. Retail 4½d. Cost 2/9 dozen. A bonus of 1s. on all orders for gross lots.

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Note New and Improved Cap as illustrated.
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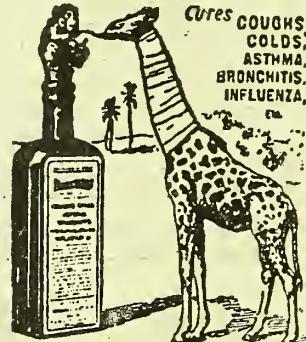
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It yields a Good Profit

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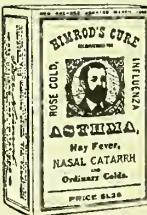
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The paroxysms of

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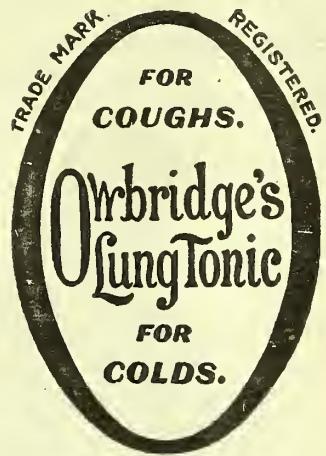
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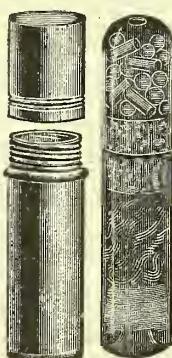
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CINNAMON TYPE, NOW ALL THE RAGE.

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SHAVING SOAP

the only soap with an Antiseptic Vaseline centre.

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The great vaporised antiseptic that for close on 50 years has been an unfailing remedy for bronchial trouble, such as—

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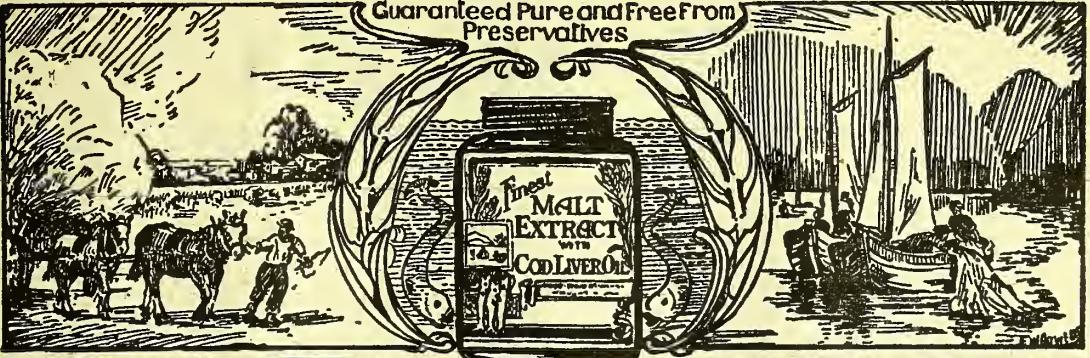
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DOSE: One wine-glass after the
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Goods well packed are half sold, and easier selling means more sales. Your own preparations attractively packed will sell considerably better.

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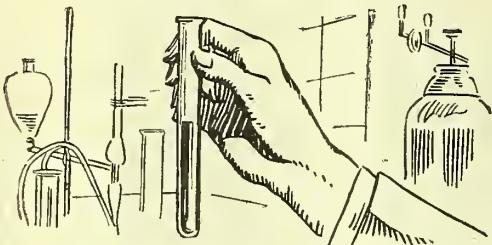
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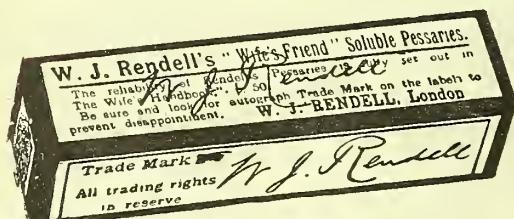
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Magnifying Power 50 to 420 diams.

In case with lock and key.

Sent free to any part of
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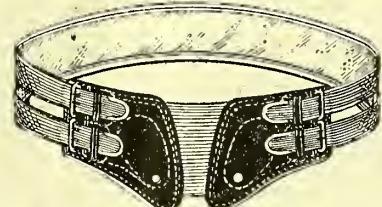
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"KINGSTON" ABDOMINAL SUPPORT. Fig. B700

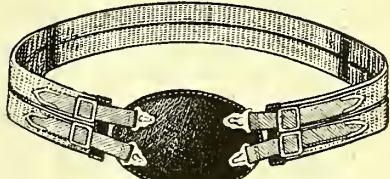


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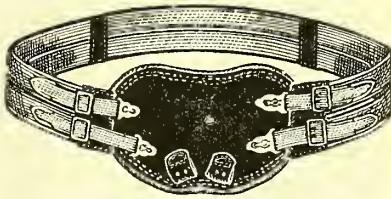
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"HAMPTON" UMBILICAL BELT
Fig. B720



"GUILDFORD" ABDOMINAL SUPPORT
Fig. 710

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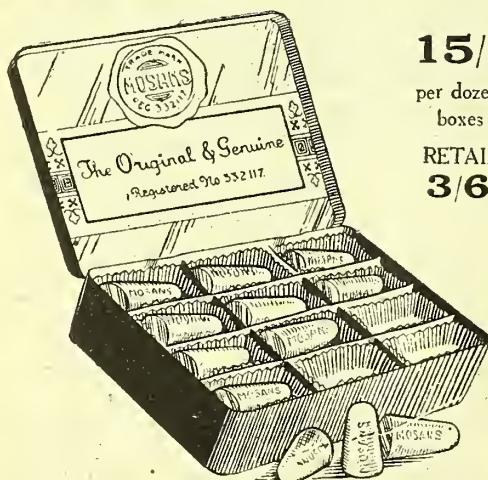
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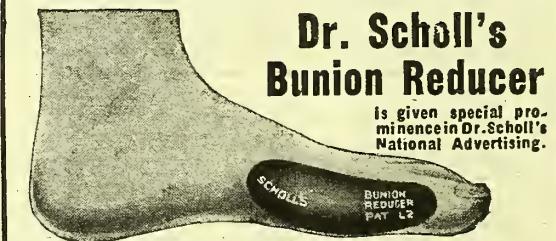
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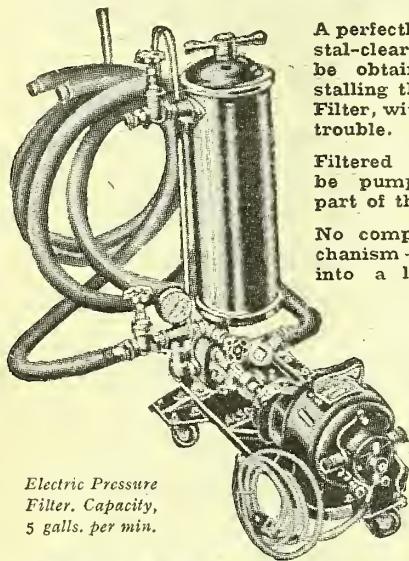
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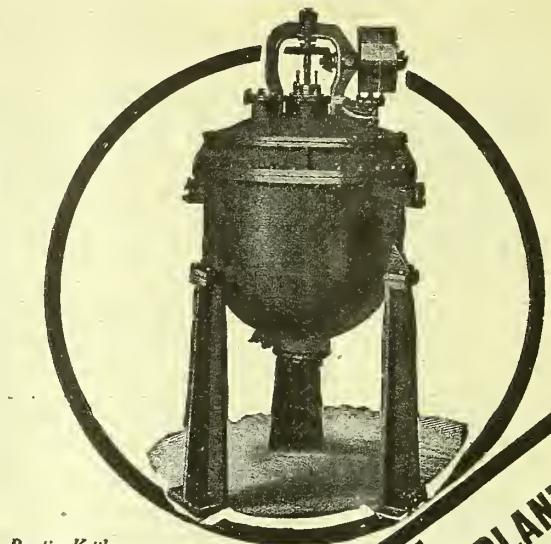
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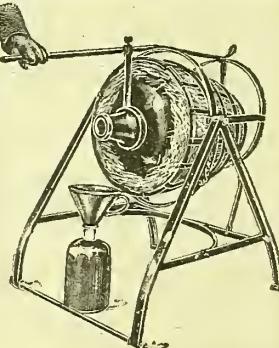
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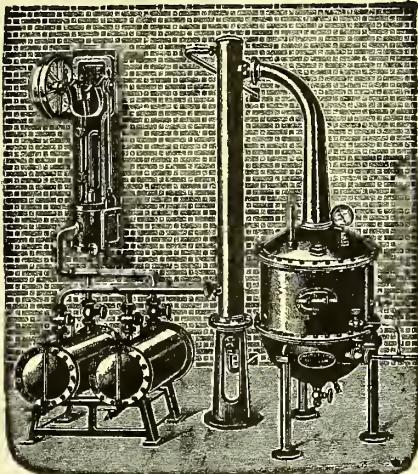
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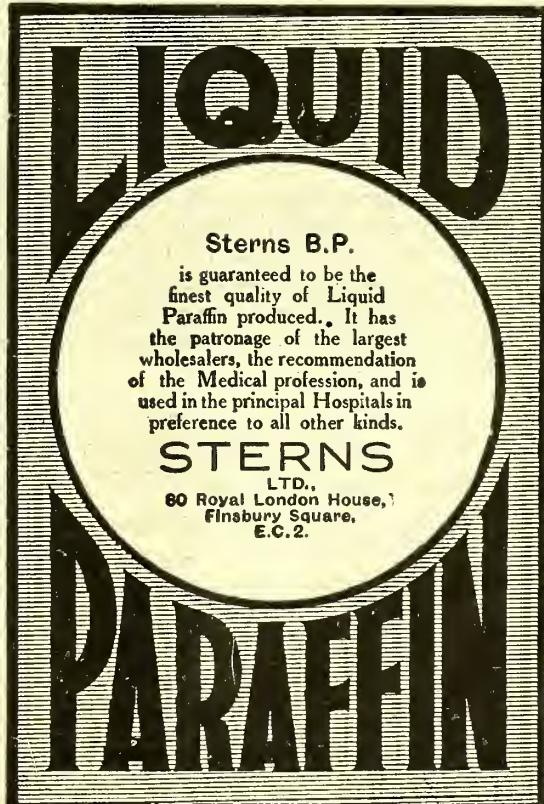
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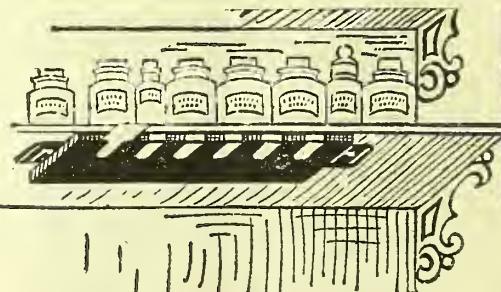
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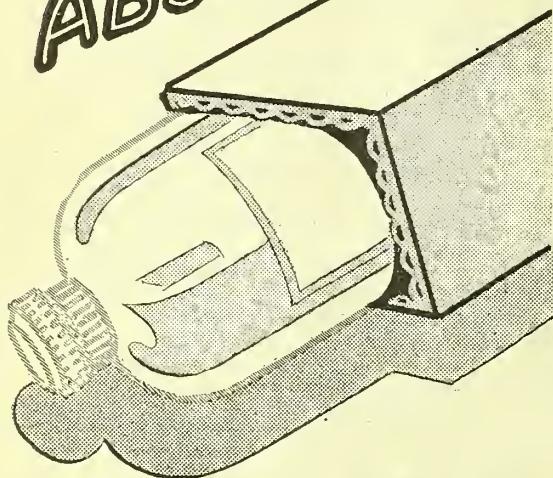
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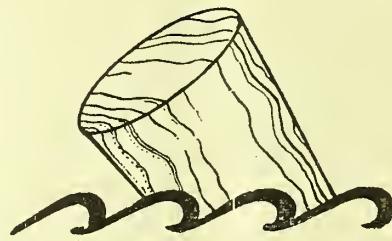
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SUPPLEMENT

42 CANNON ST.
LONDON E.C. 4

DECEMBER 21, 1929

This Supplement is inserted in every copy of The Chemist & Druggist.

SPECIAL NOTICE

OWING to the XMAS HOLIDAYS, all advertisements for the Supplement of December 28th must reach this office by FIRST POST

TUESDAY, DECEMBER 24th

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1.—MIDDLESEX.—Good-class Family Dispensing Business, with Kodak Agency; established many years; returns approach £3,000 per annum, with net profit approaching £800; double-fronted shop; good living accommodation; long lease; moderate rental; further details on application.

2.—WESTERN SUBURB.—Cash Retail Business; returns, under management, £2,100 per annum, with scope for increase; shop well fitted in mahogany and fully stocked; rent £90; sub-let £52; held on lease; price £1,600, or near offer.

3.—LONDON, W.—General Retail and Dispensing Business, with small Optical connection; established many years; returns last year £3,600; £200 from Optical; corner shop, well fitted; living accommodation; held on lease; rent £60; price £2,800.

4.—LONDON, S.W.—Cash Retail Business; returns £1,200 per annum, with scope for increase under energetic management; net profit £324; attractive corner, lock-up shop; rent £52 per annum, inclusive; held on lease; price £700.

5.—ESSEX.—General Retail and Dispensing Business; returns last year exceeded £2,350 with gross profit £250; attractive, well-fitted shop; good saleable stock; excellent house of 8 rooms; freehold may be purchased; price to be arranged.

6.—VICTORIA (Near).—High-class Retail and Dispensing Business; returns exceed £3,000; estimated value of stock and fixtures £1,400; good house; private entrance; held on lease; rent £145; price £2,300, or valuation terms entertained.

7.—LONDON, S.E.—Cash Retail Business, offering scope for N.H.I.; present returns £20 weekly; lock-up pharmacy with basement; rent £68; sub-let £94; price £750, of which sum £200 can remain.

8.—CORNWALL.—Very old-established Business; returns, under management, £2,000 per annum; modern corner premises, recently rebuilt; the shop is well fitted and stocked; price to include freehold £3,500.

9.—HERTS.—General Retail and Dispensing Business, with Wine Licence; returns last year approached £2,600; double-

fronted shop, well fitted and heavily stocked; lock-up pharmacy; rent £120 per annum; new lease; terms, valuation of stock and fixtures, plus an agreed sum for goodwill.

10.—KENT (Coast).—General Retail Business, with Kodak Agency; returns £3,800 per annum; £800 from Optical; double-fronted-corner shop, fitted in mahogany; rent £80 per annum; private house available if required; price asked for business £3,000.

11.—YORKS.—General Retail and Dispensing Business, with Kodak Agency; returns last year £2,366; double-fronted shop, well fitted and stocked; rent £75; modern house available; price asked £1,500.

12.—NORTH WALES.—Retail and Dispensing Business in centre of main street; returns, under management, £2,622, at good prices; single-fronted shop, extremely well fitted; latest valuation of stock £750; the freehold may be acquired for £1,750, or lease will be granted at £75; valuation terms entertained. Also Business fully licensed for Wines, Spirits and Beer on or off premises; established century; returns over £5,000; gross profit 30 per cent.; net £750; stock £750; fittings £750; immense possibilities; rent £150; or freehold £3,000; open eight hours daily; closed Sundays; price, apart from freehold, £1,000, plus stock and fittings at valuation; or £5,500 all at; these businesses will be sold separately.

13.—BUCKS.—Modern General Retail Business in good market town; returns approach £40 weekly, with scope for increase; further details on application.

14.—PEMBROKESHIRE.—Old-established Business, Retail, Dispensing and Optical; the returns have been £2,800, but since the death of the proprietor have fallen to £1,700 under management; gross profit 40 per cent.; double-fronted shop, well fitted in mahogany; large house; private entrance; our client desires an early sale and is willing to give consideration to any reasonable proposition.

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2.—DORSET COAST.—Light Retail Dispensing, with Kodak Agency; returns about £1,900; good position; modern pharmacy and house; price £1,100; freehold can be purchased.

3.—MIDDLESEX (12 miles out).—Good-class Retail and Dispensing, in good residential district; unopposed; returns £2,200; gross profits 40 per cent.; modern pharmacy; fully stocked; plenty of scope; price £1,700.

4.—HANTS COAST.—Good-class Retail and Dispensing Business, in main road position; returns about £1,350, increasing; modern fitted shop; well stocked; price about £1,000.

5.—BLACKPOOL—Middle-class Cash Retail, with Kodak Agency; well established; returns average over £1,750; net profit £460; large shop with house attached; well stocked; price £800.

6.—NORTH MIDLANDS.—Modern Cash Store Business, returning over £2,350, books audited; fine corner position; stock and fixtures worth £1,250; price £1,500, or near offer.

7.—SOUTH-EAST COAST.—Light Cash Retail; steadily increasing; returns exceed £1,500; net profit over £400; nice house and garden; price £1,000, or offer.

8.—LONDON (Western Suburb).—Sound, progressive Business in splendid position; returns approach £4,000; excellent profits; audited accounts; corner shop; heavily stocked; low rent; price £3,000.

9.—WESTERN SUBURB.—Good-class Family Retail and Dispensing; returns about £2,000; plenty of scope; modern pharmacy; fully stocked; large house; price £3,100.

10.—NORTH LONDON (Few Miles Out).—Good-class Retail and Dispensing; in fine position; net profit over £800; splendid house; modern pharmacy; handsomely fitted and heavily stocked; price £3,100.

11.—LONDON, W.—Profitable Cash Drug and Photographic Store; returns £30 to £35 a week; qualified chemist would soon do £50 a week; large well-fitted shop; good stock; price £950, or offer; trial allowed.

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1.—BLACKPOOL.—Recently established Chemist's Business, large shop, corner position in main street, on lease at £90 p.a.; returns average £40 p.a.; ill-health reason for disposal. Further particulars on application. (24)

2.—FOLKESTONE.—Newly-opened Dispensing and Retail Business in main shopping road on lease; 2½ years to run at nominal rental; double-fronted large shop; returns last 4½ months, £773; vendor ordered abroad; quick sale desired. Further particulars on application. (25)

3.—BRIXTON.—For immediate disposal, Light Retail Dispensing Business, with Kodak Agency and scope for Optics; situated in main road; lock-up shop; on lease, with nine years to run, at £80 per annum; beautifully fitted and good stock carried. Further particulars on application. (13)

4.—SUFFOLK.—Seaside resort. Old-established Family, Dispensing and Retail Business, on lease at £100 p.a.; good living accommodation; private entrance; £1,000 all at, or £350, plus stock and fixtures at valuation. (21)

5.—BLACKPOOL (North Shore).—Occupying commanding position in this popular seaside resort, there is for immediate disposal a Retail Dispensing and Photographic Business, with Kodak Agency; large D. & P. connection; 5 years' lease at £95 per annum; returns at present, which could be considerably increased, £1,200; net profit £420; price for quick sale £250, plus stock and fixtures at valuation. (20)

6.—BECKENHAM (Blackheath and District).—Required immediately, good-class Retail Dispensing Business with Photographic connection; neglected business would be entertained; particulars treated in strictest confidence; bona fide purchaser with cash available.

Stock-taking and Valuation of Businesses undertaken at moderate inclusive fee. Chemists are invited to consult us in respect of their requirements in connection with sale or purchase of businesses. Chemists in the North are requested to communicate with our Liverpool Offices.

CHARLES E. NAYLOR

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Undertakes Stocktaking and Valuation of Businesses at Reasonable Charges

170 Vesper Rd., Kirkstall, Leeds. Phone: Horsforth 324

JOHN BRIERLEY, F.N.A.A.

CHEMISTS' VALUER and TRANSFER AGENT

135 Queen Street, Newton Heath, MANCHESTER

Manchester, returns £1,500 p.a., £1,300 with property. West Riding, returns £1,400 p.a., lock up, £750 about. Other similar offers, Rochdale, Warrington (near), Blackpool, Southport, Leeds, etc.

"Valuations by fully qualified staff." (Tel.: Failsworth 113).

BUSINESSES FOR DISPOSAL

DEVON.—Cash Retail Business; old established; lock-up shop; turnover, at good profits, under manager, £1,050; could easily be increased; near military barracks and sea; Kodak Agency; rent £2 (inclusive) per week; long lease if desired; price £400. Apply Renouf & Perry, 1 St. Andrews Chambers, Plymouth.

ESTERN MIDLANDS.—Genuine Retail and Dispensing Business for disposal; two shops; average turnover £6,400 per annum; satisfactory reason for relinquishing; good positions in excellent market town. Full particulars, Killingworth & Dunn, Auctioneers, Boston, Lincs.

LONDON.—Good-class corner Business; splendid situation; present takings £21 weekly, without N.H.I.; stock, fixtures, fittings, £550; rent £1 weekly; rooms above; 20 years; great scope for any Chemist and guaranteed success; only genuine buyers need apply. "Bargain," 220/15, Office of this Paper.

SOTHLAND.—Business for Sale in main thoroughfare of Paisley; well-fitted roomy shop; electric light, phone; two enclosed windows; stock £350, fittings £250 (including optical eases, weighing machine, etc.); N.H.I., £450, at £s. each; drawing £1,100 cash sales; ideal opening for qualified Optician; genuine proposition. Offers to W. M. Stevenson, Accountants, 1 Rankine Street, Johnstone, N.B.

SURREY (near London).—Good-class Business, doing over £2,000, showing steady increase; 3-roomed flat over shop; owner must sell quickly, going abroad; property to be let on lease. 161/700, Office of this Paper.

SUSSEX.—Good old Chemist's Business for Sale; present takings £6,000; net profit between £1,500 and £1,600; lowest cash price £5,000; principals only. 161/699, Office of this Paper.

HIGH-CLASS Business on important main road; attractive, modern, double-fronted shop; opened 5 months; stylishly fitted; great scope for live man; illness cause of sale; lock-up shop, £200 year (house £100); can be sub-let; only wants seeing; price £1,200; price of stock and fixtures for quick sale. "Chemist," 131 Sandgate Road, Folkestone.

NICELY fitted Pharmacy; busy main road; stock, fixtures; 21 years' lease; price £500; would sell complete with freehold, £1,500, bargain, for quick cash sale. Apply "F. T.," 451 Caledonian Road, N. Phone: North 1542.

OLD-ESTABLISHED Family and Dispensing Business in West London suburban borough; long lease; rent (inclusive) £80 per annum; good opportunity for young pharmacist; owner retiring; cash £650; terms might be arranged. Full particulars from Ernest J. George, 34 Marksbury Avenue, Richmond, Surrey. Phone: Richmond 2210.

PHARMACY; no opposition; population 2,500; three doctors, one dental surgeon; Panel, Optics, Tobacco, Kodak Agency, Cupal Agency; electric light; long lease; £35 per year; Panel, November 217, takings approximately £18; good percentage profit; selling through health reasons; well stocked; quickest reasonable offer. Apply R. Brain, Nailsea, Somerset.

VERY old-established Business in busy main road, Manchester; prominent corner position; well fitted and stocked; good steady trade; living accommodation; returns last year £2,800; Kodak, N.H.I.; terms; reasonable sum for goodwill and valuation stock and fixtures; one change only in 50 years. 206/23, Office of this Paper.

VILLAGE Chemist Business for Sale, £300, including stock and fittings; rental £50; 6-roomed house included; Hampshire. Apply Hambledon Pharmacy, Hambledon, Hants.

BUSINESSES WANTED.

PHARMACIST wishes to purchase a genuine Business for cash; can negotiate and complete immediately; full particulars in confidence; management with view to succession entertained; position where there is scope for Optics preferred. Write 7 Bank Square, Promenade, Southport.

AGENCIES.

COMMISSION Agent required who covers Lancashire Chemists—preferably with own car—to handle advertised Proprietary Pills along with any other non-competing lines; good terms to energetic man. Write 161/678, Office of this Paper.

IMPORTERS of Pharmaceutical Specialities and Proprietary Medicines, established 7 years, with connections in the domestic trade, want offers from a few first-class English or Continental firms desirous of developing their businesses; English and Spanish correspondence; exclusive territory; bankers' references. Isaias G. Lopez & Co., Box 899, Bogota, Colombia, South America.

TENDERS INVITED.

THE Director-General, India Store Department, Belvedere Road, Lambeth, London, S.E.1, invite Tenders for:—
Schedule 1.—Bismuthi, carbonas, salicylas and subnitras, B.P.
Schedule 2.—43,400 gallons Cresol, saponified (R.W. co-efficient not less than 18). (Sample required with tender.)
Schedule 3.—Essential Oils.
Schedule 4.—Hydrargyrum, B.P., Hydrargyri subchloridum, etc.
Schedule 5.—Iodum and iodoformum, B.P.
Schedule 6.—71,000 lbs. Lint, plain.
Schedule 7.—Oleum Morrhuae and Oleum Olive, B.P. (sample required with tender).
Schedule 8.—65 lbs. Santoninum, B.P.
Schedule 9.—Waterproof Sheetings, Beds (air), Hot-water Bottles (rubber), etc. (Samples of materials required with tender.)
Schedule 10.—Wool Boric, Tow Carbolised, etc.
Tenders for all schedules due 10th January, 1930.
Forms of Tender available from the above at a fee (which will not be returned) of 5s. for each Schedule.

SITUATIONS OPEN.

RETAIL (HOME).

BRIGHTON.—Wanted, at once, smart Junior Assistant; knowledge of Photography and Window-dressing. Kindly give particulars as to salary, etc.; photo if possible. Leo. Benham, 6a Queen's Road, Brighton.

BRISTOL.—Experienced, qualified Manager for suburban business, with Photographic and N.H.I.; knowledge of Optics preferred; good Window-dresser and Salesman essential. Please state experience, with last three situations, age, salary, when disengaged, with recent photo, to 161/697, Office of this Paper.

LANCASHIRE.—Qualified Manager wanted for small branch business, which is capable of considerable improvement under able management; married; living accommodation available; salary £4 per week, with commission; rent and rates free; duties to commence one month after engagement. 213/27, Office of this Paper.

LONDON, N..—A good Junior Assistant (male); unqualified; outdoors; well up in Dispensing, Counter and Window-dressing. Apply by letter, giving age, height, salary and experience, and when disengaged, F. J. Sandberg, Chcn. St., North Finchley, N.12.

LONDON, N.W.1 AND W.C..—Lady and gentleman, qualified, for early vacancies; must be not afraid of work, and have sound all-round knowledge of Retail business. Personal application preferred; if by letter state experience, salary, etc. 116 Seymour Street, Euston, N.W.1.

LONDON, E.C.1.—Junior Assistant, lady or gentleman, wanted immediately; age about 20 years. Full particulars, including salary required. P.C.B. 12/35, Office of this Paper.

LONDON, S.E. (near London Bridge).—Qualified, young, energetic, trustworthy Assistant required, January 6; also smart, unqualified Assistant, between 25-30. 161/701, Office of this Paper.

SOUTH LANCASHIRE.—Two Assistants, unqualified lady immediately, qualified lady or gentleman wanted early in January, Drug Store starting N.H.I. and other business; develop new trade; co-operation, efficiency and energy wanted; salary increasing with trade. Address 219/39, Office of this Paper.

ASSISTANT wanted, January, 1930, for Country Village Pharmacy; wages 40s. weekly and 6-roomed house. 161/685, Office of this Paper.

AT ONCE.—Wanted, unqualified Junior Assistant (male). Write, giving particulars; age, experience, salary expected, references, etc. Light Counter work and little Dispensing; no Sunday duty; live outdoors; permanency to suitable applicant. Apply Plattin, Chemist, Moulsham Street, Chelmsford, Essex.

DISPENSER wanted for evenings by Chemist in North London after Christmas. State terms. 220/22, Office of this Paper.

JUNIOR Assistant or Improver wanted immediately after Christmas; N.E. London. Apply 161/695, Office of this Paper.

JUNIOR Assistant (male) required immediately after Christmas in a good-class Dispensing business in N.W. London; must be capable, energetic and careful Dispenser. Apply, giving full particulars and salary required, 218/14, Office of this Paper.

QUALIFIED lady Assistant required for Richmond district. Apply by letter, stating age, experience and salary required. Gaze, "Ravenscourt," Wealdstone, Harrow.

QUALIFIED (male), age 26, used to good-class business; must be a thoroughly reliable Dispenser. Apply, stating age, experience, salary, etc.; photo if possible. Applications not answered in 5 days respectfully declined. Woolf, 229 Golders Green Road, N.W.11.

QUALIFIED Chemist wanted immediately; good Window-dresser and capable of taking charge. Applications, stating age, previous experience, wages required, and names for two references, to be sent to Doncaster Co-operative Society, Ltd., 1 John Street, Doncaster, by December 24. Envelopes to be endorsed "Chemist."

UNQUALIFIED lady Assistant required early in January; previous experience essential, preferably Hospital. Apply Pharmacist, London Jewish Hospital, Stepney Green, E.1.

WANTED, after Christmas, young, qualified man for quick Dispensing and high-class Counter business. State age, salary, experience, etc., to W. H. Dixon & Sons, Ltd., Chemists, Haywards Heath, Sussex.

WHOLESALE.

APPLICATIONS are invited from Salesmen accustomed to selling high-grade Toilet Soaps and Preparations; the appointment is an excellent one, and payment is by commission only. State age and particulars of last 3 years' experience. Replies treated in strictest confidence. Parisian Proprietary Co., Greenfield Works, Hyde.

LABORATORY Hand, Junior, good Stock-keeper, wanted. State age, experience, and salary required. Apply to John Bell & Croydon, 50/52 Wigmore Street, W.1.

REQUIRED, smart young Representative to call on the Medical Profession; knowledge of Drugs and Pharmaceutical Preparations essential; ground covered within 20 miles of large manufacturing town in the North. Give full particulars (in confidence), 161/702, Office of this Paper.

YOUNG man, preferably single, resident in London, who is fully conversant with Surgical Dressings, to act in the capacity of Representative. 161/693, Office of this Paper.

(COLONIAL, INDIAN AND FOREIGN.)

WEST AFRICA.—Required for West Africa, capable and ambitious Chemist, with Optical diploma preferred, but not essential; must be single; not over 30 years of age; remunerative and progressive appointment offered to suitable applicant; first-class passage paid out and home; generous leave on full pay. Apply, with full particulars of experience, etc., to 161/698, Office of this Paper.

SITUATIONS WANTED.

RETAIL (HOME).

A.A.A.—MANAGER of small branch by elderly M.P.S.; walks lame, otherwise has good health and active; permanency desired. 220/18, Office of this Paper.

A.A.—CHEMIST-OPTICIAN, 26, of good appearance and address, excellent and varied London and provincial experience, desires position in good-class business; London or Cardiff and district. 218/12, Office of this Paper.

A.—QUALIFIED, 26, over 8 years' London, Continental and provincial experience, seeks permanency; good-class Dispensing and Counter; London only; free December 30. "M.P.S." 220/29, Office of this Paper.

A.—CAPABLE and fully experienced qualified Chemist; permanency or Locum; disengaged. "Chemist," 415 High Road, Leytonstone, E.11.

A.—COMPETENT lady Assistant requires good-class post in London; well experienced Dispensing and Counter; age 25; unqualified. 10 Inverness Terrace, Broadstairs.

A.—LOCUM; qualified; long experience in all branches; active; excellent references; disengaged now. "S.C.J." 54 Priory Road, West Hampstead, N.W.6. Phone: Maida Vale 8212.

A.—AMBITION and energetic gentlemanly Assistant (unqualified) desires progressive post with busy City Pharmacy or Stores; 8 years' experience; excellent references; disengaged February; salary required £4. "Trustworthy," 220/16, Office of this Paper.

A.—Locum, Relief, Assistant; good experience heavy Panel, quick Counter, Prescriber; "not registered." "G." 150 Scott-Ellis Gardens, N.W.8.

A.—QUALIFIED Manager; 18 years' experience all branches Retail; tall and active; 47; married; satisfactory references; disengaged. 220/20, Office of this Paper.

A.—AFTER CHRISTMAS.—Assistant, 9 years' experience, London, Channel Isles, provinces, adaptable any branch, desires berth. Taylor, 13 St. Alphege Walk, Redhill, Edgware, Middlesex.

A.—ASSISTANT; unqualified; married; permanency; competent and reliable; Dispensing and Counter. Chivers, 13 Sandrock Road, Lewisham. Lee Green 1544.

A.—ASSISTANT; unqualified; 21; energetic and reliable; good experience, Dispensing, Counter, Window-dressing, Ships' Medicines, etc.; excellent references; disengaged January 4; North preferred. "N.M.C." 7 Ethel Terrace, South Shields.

B.—BRISTOL DISTRICT.—Young, qualified Chemist wants temporary engagement (until January 15); whole or part time; any capacity; moderate remuneration; willing worker. Write "Chemist," 2 St. Michael's Park, Cotham, Bristol.

CHEMIST, 32, qualified, experienced, disengaged, requires post as Manager or Assistant. Griffiths, "Werfa," Hennan, Cards.

CHEMIST, qualified, 25, requires position; keen; energetic; good Salesman and Dispenser; excellent reference. 126 Goldhurst Terrace, N.W.6.

CHEMIST, 25, married, desires post as Manager; good experience; disengaged end of January; London preferred, but not essential. 220/25, Office of this Paper.

DISENGAGED.—Qualified; experienced all round; accustomed heavy Panel; good Dispenser; Locum, Manager, etc.; middle-aged; active; abstainer. "M.P.S." c/o Messrs. Beck, Chemists, 60 High Street, Stoke Newington, N.

F.B.O.A., M.P.S., young, desires berth, preferably Lancashire; present managing; 9 years' thorough experience; reliable and trustworthy; highest references. 218/17, Office of this Paper.

JUNIOR Assistant; 21; tall; all-round experience, including Window-dressing; South Wales preferred, but not essential; free one month. Apply 219/36, Office of this Paper.

LADY Dispenser-Book-keeper (Hall), aged 22, wants post with firm of Doctors; experienced; excellent testimonials; free now. 217/29, Office of this Paper.

LADY, qualified, 22, seeks position in London; West-End or City preferred; six months with good London firm; anxious to gain further experience; salary £3 10s. per week, outdoors. 220/14, Office of this Paper.

MANAGER, qualified, including Optics, desires post; 33; single; good all-round experience; competent and reliable; London preferred. 220/23, Office of this Paper.

M.P.S., 24, all-round experience (at present studying Medicine), as Relief, Locum; free December 21; prefer Liverpool, Derby districts. 204/1, Office of this Paper.

M.P.S., 25, abstainer, energetic and conscientious, seeks situation for New Year in S.W. London; excellent London experience and references; interview if desired. 25 Eardley Road, Streatham, S.W.16.

PART-TIME; qualified; evenings and/or week-end; Liverpool, Birkenhead, Wallasey. "Pharmacist," c/o 36 Gerard Road, Wallasey.

QUALIFIED, married, requires berth where there is plenty of work; Midlands or London districts preferred; excellent references; free one month from engagement. Apply 202/27, Office of this Paper.

QUALIFIED Manager, 37, single, now disengaged, seeks post; temporary or permanent; London preferred; experienced in all branches. 186/27, Office of this Paper.

QUALIFIED; varied experience, including West-End; self-reliant; dependable; Manager, Locum. Preston, 8 West Halkin Street, Belgrave, S.W.1.

QUALIFIED Manager; disengaged December 30; aged 40 years; excellent references; abstainer; good appearance. "Pharmacist," 16 Blacklands Road, Catford, S.E.6.

QUALIFIED, experienced Manager seeks situation; middle age; physically fit; competent Dispenser; moderate salary; London area preferred; free January; further particulars on application. "Chemist," 119 E. Dulwich Grove, S.E.27.

RELIABLE Assistant, unregistered, very good knowledge all branches of the trade, desires post in January; undeniably references; could well manage drug store; 7 years present post. "Energetic," 217/32, Office of this Paper.

UNQUALIFIED; moderate salary; permanent or Locum; town or country; now employed; 50. "Chemical," 28 Hemingford Road, London, N.1.

UNQUALIFIED desires position as Junior or Improver in good-class Dispensing Business; secondary education; first-class experience in Dispensing, N.H.I., Veterinary, etc.; unique Photographic experience; tall and good Salesman; Lincoln or Grimsby district preferred, but not essential. M. B. Tyson, Newmarket, Louth, Lincs.

UNQUALIFIED, 25, tall and good appearance, desires situation; Dispensing, Counter, Photographic; 7 years' experience, including London; disengaged. N. L. Jeeves, 58 Fawnbrake Avenue, Herne Hill, S.E.24.

WAGES £4 4s.—Qualified, middle-aged, abstainer, wishes position Manager or Locum; Prescriber; good Dispenser; references; free now. 220/13, Office of this Paper.

YOUNG, fully qualified Chemist and Optician, J.C.Q.O., shortly coming to London for study at the Refraction Hospital, desires post giving facilities for same. Taylor, "Osmunda," Alexandra Road, Axminster.

WHOLESALE.

A QUALIFIED Chemist (Scotsman) would like to represent a good English Drug or Sundries House in Scotland; already working Scottish area; able to drive car; well known to Scottish Pharmacists; free beginning of January. 209/37, Office of this Paper.

ASSISTANT, 9 years Retail, offers energy, ability, untiring effort for opportunity in Wholesale House; genuinely ambitious. Taylor, 13 St. Alphege Walk, Redhill, Edgware.

QUALIFIED Chemist (25), excellent experience, Retail, would like change to Wholesale or Manufacturing; good Salesman and Organiser. Write Box 5459, Samson Clark & Co., Ltd., 57 Mortimer Street, W.1.

QUALIFIED, 24, energetic, single, male, ambitious, desires represent Wholesale House; Sales administrative ability, smart appearance, requisite personality; salary or liberal commission; London district preferred; resident London; can drive car; disengaged. Write "Z," 11 Oakley Square, N.W.1.

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I GIVE BEST PRICES for Old Films (damaged, fogged or expired dates); Packet Papers, Cards (any sizes), Old Photo Goods or Cameras, Bromide Papers, Plates (all sizes, all makes). Send any goods in the photo line. I buy all, good or bad. Cash per return. A good price for all Cameras. Send them along.

S. E. HACKETT, 23 July Road, Liverpool

REPRESENTATIVE, desirous of change, is open to represent established house in Northern Counties of England amongst Chemists; over 20 years' established connection. 215/21, Office of this Paper.

SALESMAN, Representative, smart, married, educated, 34, sound London connection, 14 years' experience Proprietaries, Packed Specialities, Drugs, Institution, Doctors, Chemists, car driver, seeks outdoor or inside position immediately. "Chemicus" P.C.B. 13/9, Office of this Paper.

SENIOR Medical Student (foreign diploma), Clinical and Therapeutic knowledge, seeks part-time occupation with a large firm of foreign Importers and Exporters; knowledge of foreign languages. P.C.B. 12/37, Office of this Paper.

FOR SALE.

GARDNER'S Rapid Mixer, size B, for baking powder, etc.; price £10: two Chemist's Carboys for window decoration £5s.; seen by appointment. Laverick Bros., Bondgate, Darlington.

MISCELLANEOUS.

FAMILY INTERCHANGE.

A GERMAN Pharmaceutical Journalist, residing in Berlin, is desirous of getting in touch with an English family willing to accept his daughter, aged nineteen, as a guest for a few months, with the object of acquiring a knowledge of the English language and life in England. The arrangement to be on the basis of a mutual exchange, the daughter of the English family becoming the guest of the advertiser's family, where she would be given every opportunity of learning German and mixing in German society. 161/696, Office of this Paper.

CHIMISTS' FITTINGS.—Silent Salesman Cases, Drugfittings, Wallcases, Dispensing Screens, glass-front Counters, Perfume Cases, Window Enclosures, Glass Shelves, Mirrors, Counter Drawers. Before you decide send to **GEORGE COOK**, the well-known Chemists' Fitter, 27 Macclesfield Street, City Road, London, E.C.1. 40 years' experience.

DRUG FITTINGS, Wall Cases, Dispensing Screens, glass-fronted Counters, all Glass Counters, Perfumery Cases, Upright and Flat Counter Cases, Counter Drawers, Silent Salesmen, Glass Shelves, Display Stands, etc., in great variety. F. MAUND & E. BERG (SHOWCASES), LTD., 175/9 and 336 Old Street, London, E.C.1.

LIVERPOOL CHEMISTS' FITTERS.—A Chemist's Shop in our showrooms, fully fitted, including metal front with signs, etc., and window enclosures. No Chemist should miss this Exhibition. 40 pages Illustrated Catalogue on request. D. MATTHEWS & SON, Shop Fitters, 14/16, Manchester Street, Liverpool. Established 1834.

SECOND-HAND CHEMISTS' FITTINGS.—We have an exceptionally fine selection of these in all sizes; prices are right, and goods are in first-class condition; we shall be pleased to supply particulars and prices. Call or write, RUDDUCK & CO., 219 Old Street, London, E.C.1.

£100.—COMPLETE SET OF CHEMISTS' FITTINGS in mahogany, comprising 10 ft. Drug Fitting, 6 ft. Dispensing Screen, 6 ft. Wall Case, 6 ft. Bent Counter Case, Perfume Case and Desk, 10 ft. Glass-fronted Counter; two nests of Counter Drawers. Sketches and details on application, or may be inspected at **PHILIP JOSEPHS & SONS, LTD.**, 90/92 St. John Street, Clerkenwell, London, E.C.1. Telephone: Clerkenwell 2191. "Pharmacy Fitters for over a Century."

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WANTED.

MIXING MACHINE, about 55 lbs. Replies to 161/694, Office of this Paper.

ISSUE of Chemist & Druggist, March 1, 1924. Write Hampshire & Co., Ltd., Derby.

SHOP FITTINGS, Rounds, Connter, etc., whole or part, required at once. Hodges, 58 Victoria Road, Streatham, Lancs.

VOLUMES 2, 3 and 4, or complete set of "The National Burns," by the Rev. George Gilfillan. Steel. 24 Bouverie Road, Folkestone.

GOWER, Chemists' Bookseller, 41 Voltaire Road, Clapham, wants Pharmaceutical Books, including B.P., Pharmaceutical Formulas, B.P.C., P.J.F., Optical Books.

COPPER COATING PAN, 18 in.-24 in. diameter, on stand; Granulating Mixer, about 56 lbs. capacity, Stokes or Colton; oscillating steam jacketed Coating Pan, 24 in.-30 in. 161/692, Office of this Paper.



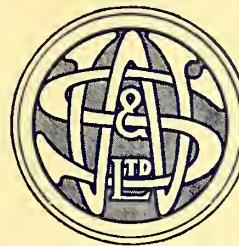
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